1990

The Effect of Self-Evaluation on Musical Achievement, Attentiveness, and Attitudes of Elementary School Instrumental Students.

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The Louisiana State University and Agricultural and Mechanical Col., 1990

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Ann Arbor, MI 48106

The effect of self-evaluation on musical achievement, attentiveness, and attitudes of elementary school instrumental students

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

School of Music

By
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B.M.E., Henderson State University, 1973
M.M. (ed.) The University of Michigan, 1975
May 1990

THE EFFECT OF SELF-EVALUATION ON MUSICAL ACHIEVEMENT, ATTENTIVENESS AND ATTITUDES OF ELEMENTARY SCHOOL INSTRUMENTAL STUDENTS

(Publication No.)

George E. Sparks, Ph.D.
Louisiana State University, 1990

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The purpose of this study was to examine the effect of self-evaluation by beginning wind instrumental students of defined musical and behavioral objectives. Specific areas in which effects were studied included attitude, physical playing fundamentals, and musical/technical skill development. Attitudes examined included students' attitude toward (a) school, (b) band, (c) instrument, (d) practice, (e) band director, and (f) self. Behavioral/musical objectives examined included (a) tone; pitch; rhythm notes (technical accuracy); and playing position (posture, embouchure, hand position); and (b) "practiced at home."

Before initiation of the study, all students completed an attitude questionnaire and played excerpts from their class work. Performances of group and individual playing were recorded, numbered, and randomized for subsequent analysis.

Following pretest administration students in the experimental group were instructed in the use of self-evaluation forms, and began the self-evaluation phase of this study. The control group proceeded as usual while the experimental group used self-evaluation forms each day.

Videotaping of both groups was done each day. Pre and postexperimental tests were conducted concerning attitude, individual, and group performance. Analysis of video data indicated higher percentages of on-task in the experimental group in every category.

Comparison of pre and postexperimental attitude test data revealed different trends between control and experimental groups. Control group scores remained somewhat static while some experimental group scores indicated significant gains.

Analysis of preexperimental performance scores indicated that the control group scored significantly higher in areas of pitch and technique than did the experimental group. Analysis of postexperimental performance scores indicated no significant difference between groups. Considered with preexperimental

differences in performance, it seems logical to conclude that the experimental group made greater progress in performance areas than the control group. Difference scores pre to post tended to substantiate the above findings.

Findings of this study indicate that use of some form of self-evaluation may increase learning and enhance attitudes of students involved in wind instrumental classes. Additional investigation would help to verify the conclusions of this work and possibly lead to more effective instruments for student self-evaluation.

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CHAPTER ONE

Introduction and Review of Literature

"Instrumental music teachers continually endeavor to find solutions to common problems in training elementary band students. Problems of performance, self-assessment, attitudes, motivation, and dropouts are most prevalent. Limited time for lessons makes improvement in all these areas more difficult" (Davis, 1981).

Applied music has long been a primary focus of music and music education. Traditionally, the emphasis in applied music has been on the repeated practice of specific materials or repertoire to develop a technical and musical mastery of a given performance medium (Madsen 1975). With recent findings in behavior modification, it would seem that a systematic application of techniques which modify classroom behaviors might appreciably improve the resultant performance (Madsen, Greer, & Madsen, 1975).

The major concerns of this study were (a) to

determine if there was a relationship between adherence to a number of specified behaviors and musical achievement, (b) to determine if there was a difference in the acquisition of the specified behaviors between students who evaluated their own behaviors and students who were evaluated by the instructor, and (c) to determine if there was a difference in student attitudes between the student self-evaluation and control groups.

With increasing demands in the number of class credits required for graduation, students of public school music programs are often limited in the number of instrumental music classes available within the limitations of completion of required credits. Increasing effectiveness within the allotted class time, therefore, becomes a major concern.

Also, although evaluation has been and will probably continue to be one of the dominating aspects of our educational system (Sadler, 1983), there is much disagreement over the most effective formats for its use in the schools. The accuracy and efficacy of student self-evaluation is the subject of much disagreement (Bolstad & Johnson 1972).

While developing performance skills in beginning band students, in groups and individually, has been one

of the foremost concerns of the instrumental teaching profession (Madsen, 1975), research into the learning processes involved in performance teaching in the beginning instrumental classroom has been fairly limited. Price (1983) writes, in an investigation of performance achievement, that "the body of research that has attempted to experimentally manipulate variables in an ensemble setting is indeed limited,..." and he continues, "...as the body of literature increases, one may have a better understanding of those variables that contribute to a more effective rehearsal."

Delimitations

The purpose of this study was to examine the effect of self-evaluation by beginning wind instrumental students of defined musical and behavioral objectives. Specific areas in which effects were studied included attitude, physical playing fundamentals, and musical/technical skill development (playing). The specific attitudes that were examined included the students' attitude toward (a) school, (b) band, (c) their instrument (d) practice, (e) their band director, and (f) self. The behavioral/musical objectives that were examined included (a) tone; pitch; rhythm; notes

(technical accuracy); and playing position (including posture, embouchure, hand position); and (b) "practiced at home."

Before the initiation of the study all students were asked to complete an attitude questionnaire and to play representative excerpts from their work in class. Performances of both group and individual playing were recorded, numbered, randomized, duplicated, and stored.

Following the pretest administration, clinics taught by music education majors from a university in southwestern Louisiana were held for each instrument. After the clinic sessions, students in the brass class (experimental) were instructed on the use of self-evaluation forms, and began the self-evaluation phase of this study. Both woodwind and brass classes were given a four line assignment for "homework" and began class each day with the playing of those four "homework" lines. The woodwind class proceeded as usual while the brass class used the self-evaluation forms to evaluate their progress on the "homework" each day. Videotaping of both classes was done each day and self-evaluations were randomly checked to help students make adjustments if needed.

Mid and postexperimental tests were conducted concerning attitude, individual, and group performance. All of the playing tapes, both video/audio and audio were adjudicated by experts in the field.

Definition of Terms

The following definitions were generated through the researching of texts dealing with beginning instrumental pedagogy, behavioral studies in education and music education, practical experiences from two years of research in public school laboratory projects in Utah, and recommendations from experts in the field.

On-Task: The student is in one of the three positions deemed as appropriate within the learning setting as directed by the teacher, and is producing a characteristic tone, accurate pitch, rhythm and notes (Wardle, 1989).

Rest Position: Student and horn are in comfortable position to take verbal instructions from the teacher (Wardle, 1989).

Practice Position: Proper horn and finger position to practice fingering, rhythm, etc. without producing an audible sound (Wardle, 1989).

Playing Position: Horn is in proper position to perform materials as directed by the teacher. This position includes posture, embouchure, and hand position appropriate for the student's particular instrument (Wardle, 1989).

Proper Posture: Sitting erect in a chair with both feet on the floor. Back should be off or lightly touching the chair back (Wardle, 1989).

Proper Embouchure: Embouchure for the student's particular instrument as defined below.

Flute: 1. Lower lip touches inner edge of the blow hole. 2. Air opens the aperture naturally. 3. The aperture is, as much as possible, in the center of the lips and is shaped as a small oval (Saucier, 1981; Westphal, 1962).

Clarinet: 1. Approximately one third of wedge shape of the mouthpiece in mouth. 2. Top teeth on top of mouthpiece and centered as much as possible. 3. Just enough bottom lip rolled over bottom teeth to cushion reed from teeth. 4. Chin pulled down or pointed. 5. Mouthpiece wedged against top teeth (Saucier, 1981; Stein, 1958; Westphal, 1962).

Saxophone: 1. one third of wedge shape of the mouthpiece in mouth. 2. Top teeth anchored on top of mouthpiece and centered as much as possible. 3. Bottom lip supporting and cushioning reed. 4. Chin gently pulled down or pointed (Saucier, 1981; Teal, 1963; Westphal, 1962).

Trumpet: 1. Chin is pointed, not bunched. 2. Teeth are in direct opposition. 3. Mouthpiece should be placed directly over the center of the aperture and centered with respect to both lips. 4. Teeth are opened naturally (Hunt, 1984; Zorn, 1977).

Trombone: 1. Chin is pointed, not bunched. 2. Teeth are in direct opposition. 3. Mouthpiece should be placed directly over the center of the aperture and centered (Hunt, 1984; Zorn, 1977).

Baritone: 1. Same as trombone (Hunt, 1984; Zorn, 1977).

Tuba: 1. Chin is pointed, not bunched. 2. Teeth are in direct opposition. 3. Mouthpiece placement is dictated by size of tuba mouthpiece to be as centered as possible (Hunt, 1984; Zorn, 1977).

Proper Hand Position: Position as defined below for each student's particular instrument.

Flute: 1. Triangle of support (left index

finger, right thumb, mouth against blowhole) supports instrument. 2. Right thumb stays between first and second fingers below flute. 3. Fingers stay as close as possible to appropriate keys at all times (Saucier, 1981; Westphal, 1962).

Clarinet: 1. Instrument is supported by right thumb (at base of thumb nail) and mouth. 2. Fingers stay as close as possible to appropriate keys at all times (Saucier, 1981; Stein, 1958; Westphal, 1962).

Saxophone: 1. Instrument is supported by neck strap and right thumb. 2. Fingers stay as close as possible to appropriate keys at all times and must be properly alligned over key pearls (Saucier, 1981; Teal, 1963; Westphal, 1962).

Trumpet: 1. Instrument supported by the left hand with fingers surrounding the valve casings and third finger in the third valve slide ring. 2. Right hand positioned so that the thumb is under the lead pipe and between the first and second valve casings. 3. Right hand fingers curved slightly and resting gently on the valves (Hunt, 1984; Zorn, 1977).

Trombone: 1. Instrument supported by the left hand with the first finger over the mouthpiece lead pipe and the next three fingers around the bottom of the outer slide. 2. The middle finger should be braced against the upper brace. 3. The right hand thumb rests on top of the slide brace. 4. The index to the ring finger rests on the inside of the lower slide (Hunt, 1984; Zorn, 1977).

Baritone: 1. The baritone is supported by the left hand grasping the bottom tubing in a comfortable place. 2. Right hand fingers maintain a gentle curve and rest on the valves. 3. The right hand thumb goes in the thumb ring if available (Hunt, 1984; Zorn, 1977).

Tuba: 1. Right hand technique and placement is same as baritone. 2. Support of the tuba is effected by grasping the inside of the large tubing at the top of the instrument. 3. Hand position and instrument placement are affected greatly by

differences in instrument design (Hunt, 1984; Zorn, 1977).

Review of Related Literature

Wind Instrumental Pedagogy

It is a mistake for any wind instrumental teacher to think that students, even though they may be fifth graders, cannot understand the workings, physics, and developmental procedures for producing a good embouchure. The job of the teacher is to make everything sufficiently clear so that students will understand every detail. They should understand what should happen and how and why it happens (Robinson, 1967, cited in Brass Anthology, 1980). There are, of course, many different theories of what constitutes "correct" playing fundamentals, and it is the teacher's responsibility to decide which of the proposed theories of "correct" playing to teach and then to systematically pursue the instructional goals appropriate to the attainment of those "correct" playing fundamentals (Greer, 1980).

Flute

The flute is unique among the woodwind instruments in that the player must form and control the aperture of the embouchure, whereas all other woodwind players have

to control a preset aperture. The object of an effective flute embouchure is the control and focus of the air stream in a manner so as to maximize its effectiveness and minimize waste.

The formation of the flute embouchure is begun by placing the lower lip on the embouchure plate. The lower lip should cover approximately one third of the blow hole. The size of the aperture can be determined in one of two ways. Ideally, the aperture size should be determined by the air column. If the student has trouble finding the edge of the blow hole, the aperture can be opened fully and then slowly closed after the edge is found. Barring physical difficulties, the aperture should be centered in the lips and shaped as a small oval (Saucier, 1981; Westphal, 1962).

Support of the flute is accomplished by a triangle of support. The left hand index finger pushes the flute towards the body and face, while the lips and right hand thumb support the flute and push against the left hand index finger. The right hand thumb must remain between the first two fingers of the right hand. To facilitate technique, the fingers must stay as close to the appropriate keys as possible at all times (Saucier, 1981; Westphal, 1962).

Clarinet

There is considerable disagreement as to what the proper embouchure is on clarinet. In the United States, the single lip embouchure is by far the most common approach to clarinet playing, while in Europe the double lip embouchure is very prominent. For the purposes of uniformity of sound, the single lip embouchure is most often taught exclusively in public schools in the United States.

To form the single lip embouchure the student should place about one third of the wedge shaped portion of the mouthpiece in the mouth. The top teeth should be placed firmly on top of the mouthpiece. A very small portion of the lower lip should cover the bottom teeth, and the chin should be pointed or pulled down. Finally, the mouthpiece should be wedged firmly against the top teeth (Saucier, 1981; Stein, 1958; Westphal, 1962).

Good hand position on the clarinet starts with a knowledge of the points of support of the instrument. Support of the clarinet is accomplished with the right hand thumb and the mouth. All other fingers must be free of the support of the instrument so that they can be used in furthering technical aspects of clarinet playing. The support by the right thumb must be at approximately the

base of the thumb nail. As in all of the woodwind instruments, the fingers must remain as close as possible to the appropriate keys at all times (Saucier, 1981; Stein, 1958; Westphal, 1962).

Saxophone

The saxophone embouchure is very similar to the embouchure used in clarinet playing. Although the differences are slight, they are crucial to the development of proper sound characteristics of the young saxophonist. The wedge of the mouthpiece is, like the clarinet, approximately one third of the way in the mouth. The top teeth are firmly planted on top of the mouthpiece. The chin is pointed, but not radically. The lower lip should be over the bottom teeth only enough to barely cover the teeth or not at all. In some cases, on the saxophone, the lower lip will serve as the support of the reed. Thus, the slightly less pulled chin, and a slight overbite will result in a softer cushion for the saxophone reed and will produce a more mellow sound (Saucier, 1981; Teal, 1958; Westphal, 1962).

Hand position for the saxophone is somewhat dictated by the fact that the saxophone is held by a strap. The strap must be adjusted so that the saxophone comes to the player's mouth. The saxophone is then balanced with the

right thumb in the thumb rest. The thumb should contact the rest at the base of the thumb nail. The left thumb should be on the top thumb rest at a 45 degree angle, so that the thumb is always in contact with both the rest and the register key. Again, all the fingers should remain as close to the appropriate keys as possible and be aligned with the pearls of the keys (Saucier, 1981;. Teal, 1958; Westphal, 1962).

Trumpet

The trumpet embouchure is much like the horn embouchure with the exception of the mouthpiece placement. In the case of the trumpet the mouthpiece is placed approximately centered between the upper and lower lips.

Support of the trumpet comes from the left hand, which is placed firmly around the valve casings, with the third finger in the third valve slide. The right hand, not used in support of the instrument, has the right thumb placed below the mouthpiece tube and between the first and second valve casings. The first three fingers of the right hand should be slightly curved and rested lightly on the three valves (Hunt, 1984; Zorn, 1977).

Trombone

The trombone embouchure, again, is similar to all brass instrument embouchures. Most authorities agree that the larger the mouthpiece, in brass instruments, the less critical the placement. However, most would also agree that the general rule is to center the mouthpiece between the upper and lower lips (Hunt, 1984; Zorn, 1977).

Due to the technical aspects of the slide, hand position on the trombone is a little more complicated than on the other brass instruments. Support of the horn comes from the left hand. The first finger goes over the mouthpiece lead pipe, and the next three fingers go around the bottom of the outer slide. The middle finger is braced against the upper brace. The right hand operates the slide. The thumb rests on top of the slide brace, while the remaining three fingers rest on the inside of the lower slide. The little finger can be placed wherever comfortable (Hunt, 1984; Zorn, 1977).

Baritone

The baritone embouchure in nearly all respects is similar to the trombone embouchure. The vertical placement of the mouthpiece is approximately centered.

Support of the baritone is effected by the left hand grasping the bottom tubing wherever the student finds it most comfortable. Right hand fingers are gently curved, and the fingertips gently rest on the valves. The right hand thumb goes in the ring on the bell pipe (Hunt, 1984; Zorn, 1977).

Tuba

The tuba embouchure is probably the least crucial of all embouchures in respect to vertical placement. The large size of the mouthpiece makes a fairly central placement the most usual and generally the most comfortable.

Right hand placement and technique is basically the same on the tuba as it is on the baritone. The left hand supports the instrument by grasping the inside of the large tubing at the top of the instrument (Hunt, 1984; Zorn, 1977).

Behavioral Techniques

"The application of behavioral teaching techniques to facilitate learning has been the center of increasing educational interest. Contingent reinforcement has been used in various educational settings to guide student achievement and attitudes" (Moore, 1976).

Many of the initial entries into behavior modification literature involving music dealt with the use of music as a contingency to reinforce extra-musical behavioral changes (Greer et al., 1971; Jorgenson, 1974; Madsen and Forsythe, 1973; Madsen and Madsen, 1972; Steele, 1971). The use of contingent reinforcement in behavior modification is based on the subject's desire to acquire things that are desirable and/or to gain approval of some type (Homme, Csanyi, Gonzales, & Rechs, 1971; Madsen and Madsen, 1970). In the above studies, music was used as the reward for attainment of specific behavioral goals.

Other studies have dealt with different types of contingent reinforcement to further musical objectives and/or behavioral objectives which can lead to improved teaching and learning in the music classroom (Forsythe, 1969; Greer et al., 1971; Kuhn, 1972; Madsen & Madsen, 1972; Madsen, Wolfe, & Madsen, 1969; Murray, 1972). Although many of these studies involved the use of rewards such as M and M's, fruit juice, flavored cereal, etc., some studies indicated that the use of verbal approval rewards is an effective tool in the music teaching process (Forsythe, 1969; Kuhn, 1969). When a teacher wants to reinforce a specific behavior, a payoff

must first be found. The payoff can be different for different subjects. After the teacher reinforces a specific behavior, an increase in that behavior will likely occur. The rationale upon which behavior modification is based is that all behaviors are learned, including that of knowledge of subject matter. In time, during the learning process, approval of the teacher or self-approval will come to be sufficient reinforcement for behavioral change (Madsen and Madsen, 1970). Some studies have suggested that even the activity itself, i.e. music performance, may be a reinforcing element (Yarbrough, 1975; Yarbrough and Price, 1981); and that the interruption of that performance might be viewed as punishment. This view is reinforced by Forsythe (1977) who found that educational experiences which require an active role for the student are associated with the lowest frequency of off-task behavior.

The use of grades as a contingent reward has also been studied (Greer, 1980; Zurcher, 1980). Many current and past research projects have looked into the causes of student failure in school. A great deal of material now available from those projects fairly convincingly demonstrates that student failure, in many cases, can be overcome by better teaching programs and the effective

use of contingent reinforcement within those programs (Greer, 1980; Homme et al., 1971; Zurcher, 1980).

Self-Managed Contingencies

Many studies in the area of behavior modification have dealt with the application of externally managed contingencies. However, only a few studies have explored the possibilities of self-managed contingencies and their effect on desired classroom behaviors. Some of the studies that have begun to deal with contingencies based on student self-evaluation and student control of the contingent reward include Balland and Glynn, 1975; Greer, 1980; Kent and Davis, 1980; Yarbrough, Wapnick, and Kelley, 1979; and Zurcher, 1980.

As in other studies, a 1977 study by Dorow and Greer suggests that there is reinforcement value in the introduction of a musical instrument. The Dorow and Greer study differs from most others on this subject by suggesting that the reinforcement of the instrument is short lived, and at least some of the reinforcement value of the instrument is derived from the novelty effect of the instrument. Also of note, was the suggestion that the lack of reinforcement brought on by the acquisition of the instrument over the period of this experiment,

could have been the result of the lack of evaluative reinforcement for the learning task over a long period of time. Finally, Dorow and Greer write, "It would seem that reinforcement extrinsic to performance itself is needed in beginning instrumental programs for a considerable period of time if dropouts are to be avoided and if the teacher is to create productive learning."

The results of studies on self-managed reinforcement contingencies have consistently demonstrated that behavior can be modified and maintained as well as with externally managed reinforcement contingencies. A study which dealt with disruptive behavior in the classroom suggested that behaviors maintained by self-reinforcement may be more resistant to extinction than behaviors maintained by external reinforcement (Bolstad, Orin & Johnson, 1972). A 1971 study by Johnson and Martin suggested that self-evaluation serves as a reinforcing element in the studies on self-reinforcement of behaviors.

Behavioral Observation

In recent years observation of behaviors has become the principal method of experimental analysis in the behavioral sciences (Madsen et al., 1975). In most

research involving behavioral studies, observation of the specified behavior is accomplished by one observer with an additional observer to substantiate the data through simultaneous observation (Azrin & Powell, 1969; Fixsen, Phillips, & Wolfe, 1972). Many studies divide time periods into small segments, scan during these small segments for observable behaviors, and record or count those behaviors. When observing the student for the recording of behaviors, it is very important that the behaviors observed be easily describable and quantifiable (Buckley and Walker, 1978; Price, 1983). Price focused a video camera on a maximum of six students at a time for 10 second intervals. Observors then counted the number of students recorded for a particular 10 second period and the number of those students that were observably off-task during that period. A percentage was then obtained by taking the number of students observed to be off-task and dividing by the total number of students in view. The use of videotape technology in experimental research is a very effective manner of accumulating data that can be analyzed and viewed at any time by any number of observers (Furman, 1984), and interobservor agreement or reliability can be 100% perfect (Spradling, 1985).

One of the most important aspects of behavioral observation is the validity and reliability of assessing those observations. The most widely used approach to reliability seems to be the use of observer agreement tests (Taebel and Coker, 1980). The most often used formula for this reliability validation is:

$$\frac{\text{AGREEMENTS}}{\text{AGREEMENTS + DISAGREEMENTS}}$$

(Yarbrough 1975; Price 1983). In many instances it is impractical to have observers throughout an experimental period, and it becomes necessary to have the subjects record their own behaviors. Azrin and Powell (1969), in an experiment with adult administration of prescription drugs, used self-reporting of behaviors with periodic observation by peers. The subject-observer agreement in the Azrin and Powell study was rated at 98%.

In a dissertation dealing with data-based approaches to the preparation of elementary school general music teachers, Rosenthal (1982) advises that research into the efficient recording of behaviors, "...such as wrist counters, hash marks, or covert counting..." would be very helpful. It would make it possible for the teacher to avoid the logistical pitfalls of setting up and viewing videotapes if it were found to be of equal

effectiveness. Rosenthal continues, "With the use of these types of techniques, fewer behaviors would be able to be monitored; however, it has been shown in previous research that modification of one behavior may result in the simultaneous modification of other behaviors."

The preponderance of the literature in musical and non-musical contexts suggests the effectiveness of behavioral self-assessment and the use of videotaped samples of classroom behavior.

Assessment of Musical Performance

There are many factors that can influence the outcome of objective measures when applied to any situation. Psychologists generally agree that human judges lose objectivity because of tendencies to be too lenient, because they are influenced by others, because they are unable to handle adjudication of the complexities of the behaviors, because they are influenced by the "halo" effect, and because they avoid the use of both of the extremes on most rating scales (Schmalstieg, 1972). In the Schmalstieg project, these problems were dealt with by (a) precisely defining the behaviors that were to be measured, (b) recording and giving the adjudicators examples of the correct

behaviors, (c) determining the optimal number of discrete points or subdivisions on the rating scale so as to avoid too course or too fine a judgment, (d) randomizing the order in which the behaviors were adjudicated--the judges did not know whether they were rating pre or post project performances, (e) performing a pilot study to measure the reliability of the instruments used by the adjudicators, and (f) carefully selecting adjudicators from specialists in the field.

Price (1983) used audiotaped recordings of pretest, posttreatment, and posttest music performances to judge progress of musical achievement. Three expert judges experienced in conducting and adjudication heard pre and posttest recordings ordered randomly. The judges rated the performances on intonation, blend, balance, tempo, dynamics, tone, rhythm phrasing, ensemble, articulation, style, and artistic effect on a scale of one through four. Although the adjudicators in the Yarbrough et al., (1979) study did not assess musical performance, they also used random ordering for the assessment of video-taped recordings of student conductors.

Dorow and Greer (1979) used two independent observors to assess the performance of third, fourth, and fifth graders' performances on recorders. The

performances were assessed from live performances during which the adjudicators were screened from the subjects. Students performed the examples twice, once to allow the student to become familiar with the room and procedures, and once as the test performance. The adjudicators counted correct beats for each performer. Correct beats were defined as a beat that (a) had the correct pitch sounded, (b) with no other pitches sounded during that beat, and (c) a beat of rest had to be silent. Interobservor agreement under the previously stated conditions averaged 94 percent.

McGarry (1967) studied the use of vocalization in the improvement of the development of junior high school beginning band students. The Watkins-Farnum Performance Scale was used as both a pretest and posttest of musical performance achievement. The items under review in the McGarry study included technical accuracy, duration, slurs, rests, fluctuations in tempo, expressive playing, fermatas, and observation of repeats. MacKnight (1975) also used Watkins-Farnum to determine differences among beginning instrumentalists' performances in a test of the effect of using tonal patterns, instead of traditional note fingering patterns, in the initial teaching phases.

Student Attitude

In the introduction of a 1972 study by Williams of attitudes of college students toward various types of musical selections, the researcher writes, "Attitude and attitude change, although recognized as important by music educators, historically have received little attention in music research. Most of the research has been focused on musical ability and prediction of success in music."

Over the past decade, research on the attitudes formulated by students in general music and a variety of music learning situations in schools has been more prevalent. Many of these studies, though inconclusive, have suggested some disconcerting information (Pognowski, 1985).

Attitude is one of the many dimensions of the musical learning process that is of concern to music educators. Attitude towards the music class is thought by many to have a great effect on the efficacy of the learning process . Leonard and House state that student attitude determines to a large extent the attainment of educational objectives in a given classroom situation (cited in Davis, 1981). Cowell (1969) states that

students achieve very little in any endeavor unless they possess a favorable attitude toward the subject matter and method.

In a study of attitudes of elementary school students across all subjects, music was found to be the only subject area with a downward or negative attitude trend (Haladyna and Thomas, 1979). Other studies suggest that with increasing age and grade level, attitudes toward music become progressively less positive (Broquist, 1961; Nolin, 1973; Taebel & Coker, 1980). These studies also found that the deterioration in attitude toward music was more severe in males than in females, and more severe in students that were not involved in playing an instrument. Nolin (1973) also concluded that with regard to elementary school students, less frequent class meetings contributed to the decline in attitudes toward music, and that the addition of piano accompaniment to singing activities served to improve student attitudes toward those activities. Bodecker (1969) found that the musical development and attitude of third grade students toward music were significantly improved through the addition of experience on a keyboard instrument in their musical training.

A study by Flanders (1967) discovered a strong correlation between teacher behavior and student attitude. In a study of conductors, Price (1983) found that teacher reinforcement played a vital role in the development of positive attitudes and attentiveness in music class.

In a study by McCarthy (1974), attitude was examined in relationship to a change toward more individualized instructional technique. Davis and Rand (1980) found that a self-evaluation group judged the class more satisfying by a significant margin than did the teacher evaluated group. The attitude of the students was checked by a questionnaire completed at the end of the experimental period. The questionnaire included questions on the instructor, the evaluative procedures, and the number of hours spent on the class. The five point Likert scale was used on the questionnaire.

Pognowski (1985) measured student attitudes in relation to a POMC, or Process-Oriented Music Curriculum. In her assessment of student attitude, she used the Musical Attitude Inventory developed by Nolin (1973). Questions were written in the form of incomplete sentences, such as, "When we improvise music." Students were then asked to complete the sentence with choices

such as, "I like it" or "It's OK." Nolin (1973) assigned values to the three possible responses, totaled the values from the responses, multiplied the total by 100, and divided the total by the number of questions asked. Taebel and Coker (1980) used pairs of polar opposite statements on either end of a Likert scale. Their questions included items on self-concept, music class, music in general, and musical activities in and outside class. In a study of contingency managed instruction by Moore (1976), attitudes were measured using semantic differentiation. Adjectives were paired, and an affective scale of seven points was used for responses. Students responded in four areas: text book selection, class organization, class objectives, and class influence on the student's future teaching skills. In a study of the effect of the use of keyboard instruments in the musical training of middle school students, the investigators constructed a music attitude survey. The test included questions on the student's enjoyment of music, their enjoyment of the piano, their musical skills and ability, and their overall creative ability. A five point rating scale was used, and significant differences were found between the control and the experimental groups (Wig, and Boyle, 1982).

The Taebel, Coker study (1980) used two tests of reliability of the instrument used to test attitude. The first was the test-retest reliability coefficient which for their study was rated at 0.72, and the other was the split-half reliability coefficient which was rated at 0.91. Both measures were achieved using the Spearman-Brown formula.

Evaluation/Self-Evaluation

One of the many problems facing the classroom music teacher is the process of student evaluation. While most teachers would acknowledge the complexities of teaching a young student the "art" of playing an instrument, they frequently underestimate the complexities of evaluation of the progress of that student (Sadler, 1983).

An article titled "Evaluation and the Improvement of Academic Learning," (Sadler, 1983) states that "evaluation is a dominating aspect of educational practice. It strongly influences what students attend to, how hard they work, how they allocate their study time, and what they can afford to get interested in." Again, quoting from Sadler, he states that "...academic learning in the arts and humanities is directed towards complex ends and

needs to face more squarely the key role of evaluation in the development of expertise. Good evaluation is not an adjunct to good teaching; it is good teaching."

Evaluation takes basically two forms, that of formative and summative. Formative evaluation is concerned with enhancing the abilities of the student, while summative evaluation deals with assessing a student's progress or ability at a certain point in the process of the course work (Butler, 1985). An ongoing process of formative and summative evaluation by the teacher, student, or teacher and student leads to a better understanding of the goals of learning through a conscious reflection by the student as to what they have accomplished and where they are headed. This type of evaluative pattern also leads to "intelligent learning," or learning in which the teacher helps the student develop a concept of excellence and develop a strategy to attain that excellence (Sadler, 1983).

One of the most important aspects of evaluation and the learning process is an understanding by both teacher and student of the criteria on which evaluation will take place. One of the requirements of programs of competency-based music education is the clear, concise statement of objectives based on a review of textbooks

and research pertaining to the field of study, so that there can be student accountability and so that the student can be somewhat self-evaluating and self-correcting. The word evaluation implies an appraisal of criteria, the level of attainment of those criteria, and a connection between a student's action and the level of attainment (Sadler, 1983). A study in self-correcting and self-assessing was carried out by D'Aurellio (1973) with beginning band students. The experimental group was expected to find, report, and correct errors in their own performances.

An example of a thorough listing of learning criteria is the 1979 study by Yarbrough et al. on beginning conductors, in which every facet of beginning conducting was specified. Eight categories of behavior were specified, and assessment instruments were devised to count the occurrence of those behaviors. Another example of the listing of specific criteria of evaluation is the 1981 study by Davis, in which some of the elements of performance were student-evaluated by fifth and sixth graders. In a 1982 dissertation, Rosenthal defines data-based approaches to music education as entailing the definition of behaviors relevant to the area.

Many studies and texts cite the effectiveness of self-evaluation in the learning process (Ballard & Glynn, 1975; Broden, Hall, & Mitts, 1971; Froseth, cited in Lapointe, 1981; Furman, 1984; Glynn, Thomas, & Shee, 1973; Greer, 1980; Keefe, 1985; Leonard & House, 1972; and Prickett, 1983). A 1980 study by Kent and Davis demonstrated that students using self-evaluation and self-grading scored, on final examination, comparably to a control group evaluated by the instructor. Johnson and Martin (1971) suggest that self-evaluation served as a reinforcing element in behavior modification. Pricket (1983) found that student self-monitoring of specific unwanted verbalizations during the teaching process had a significant effect on the reduction of those verbalizations. In a study of sixth grade music students, Davis (1981) found that self-evaluation in combination with singing was a significant tool in the teaching of beginning instrumental students. In the Davis experiment students evaluated their musical performance in the following categories: (a) note accuracy, (b) phrasing, (c) tone, (d) rhythmic accuracy, (e) tempo, (f) articulation, and (g) dynamics. In an experiment focused on preparation of elementary music teachers, self-assessment was employed to increase the

prospective teacher's use of musical activity (Rosenthal, 1982).

The 1979 study of conducting students done by Yarbrough et al. compared student progress between a group that watched video-taped recordings of their conducting examples with an expert teacher, with those who viewed their conducting examples and evaluated their own performances. A significant difference existed in the outcomes of these two groups.

Madsen and Alley (1979) also used self-evaluation of video recordings in the education of music therapy students. The use of self-assessment of video-recordings, again, proved effective in the modification of behaviors. Rosenthal (1982) used self-evaluation in much the same way as Madsen and Alley, with the exception that subjects were future elementary music teachers. Their first self-evaluations were much more negative toward themselves than the self-evaluations that followed. Rosenthal suggests that this may be indicative of improved attitudes brought about by self-evaluation followed by an opportunity to improve performance.

The literature seems to be divided as to the accuracy of the self-evaluative process. James Diggory,

in a 1966 text on self-evaluation, states that in accepting the assumption that individuals use self-evaluation as a means of achieving goals, the question is raised as to the accuracy of those evaluations. Some studies seem to demonstrate the accuracy of subject self-evaluation (Bolstad and Johnson, 1971; Davis, 1981) while others seem to raise serious questions as to the ability of subjects to judge themselves (Burke, 1969; Kent and Davis, 1980). Evaluation of any kind was found to be most effective when there was immediate feedback and when the feedback was organized methodically for record keeping (Keefe, 1985).

The bulk of data available in research on self-assessment, when coupled with a priori definition of behaviors, suggests that as a tool of behavior modification, self-assessment is a highly effective tool (Rosenthal, 1982).

Experimental Design

Whitener (1983) studied the effects of the use of a comprehensive musicianship approach to beginning band. This study was designed with one group taught using the comprehensive approach (experimental), and one using the

traditional performance approach (control). Teachers were nested within the treatment levels, and a pretest-posttest was used to extrapolate data. Whitener also used a system of weighting of factors involved in determining performance levels.

MacKnight (1975) studied the teaching of tonal patterns, as opposed to note names, fingerings, and sounding the note, with beginning wind players and its effect on their music reading ability. This study involved 90 students from three schools. A pretest-posttest design was used, and an aptitude and attitude pretest was administered to check for preexistent conditions within the groups that would affect the experiment.

In a study by Dorow and Greer (1977) that studied the reinforcement effect of a musical instrument on third, fourth, and fifth graders, the experiment was conducted over a period of six weeks of classes. Four trained observers were employed, two to collect data and two for reliability. Each data observor was present for half of the class periods, and a reliability observer was present for three fourths of the classes.

In a 1978 study by Madsen and Madsen (cited in Rosenthal, 1982), intact classes were randomly assigned

to experimental and control groups. Because of this study contamination, the first group check was designated as a pretest and used to check for differences preexistant within any of the groups.

A 1981 study by Davis, which has direct implications to the present study, studied the effect of singing activities, self-evaluation, and a combination of the two on the performance abilities and attitudes of beginning instrumentalists. Because of the way the schools were set up, Davis taught two of the classes, and another music educator taught the third class. The classes were also kept intact within schools. Again, because of nonlaboratory circumstances, Davis' subjects met together once a week. Even when classes were combined (control and experimental), the experimental group continued their self-evaluation procedures. The pretest-posttest method was used to indicate any prestudy differences, and Davis attempted to make sure that the materials covered and methods used were comparable.

Summary

The use of behavioral techniques in the education of children through adults has become a common topic of research in a wide variety of specialized fields. Music

researchers and educators have only recently begun to look into the use of behavior modification in the music classroom (Forsythe, 1969; Kuhn, 1972; Moore, 1976; Murray, 1972). Even though behavior modification is only a recent phenomenon in music and music education, it has been shown to be a highly effective method of modifying teaching strategies and increasing productivity in the music classroom (Furman, 1984; Moore, 1976; Rosenthal, 1982).

Self-managed contingencies are even more on the forefront of research than behavior modification in general. Although the body of literature has not been conclusive in the result of self-managed contingencies, there are a number of studies that would suggest its efficacy in music training (Greer, 1980; Kelly, 1979; Yarbrough et al., 1979; Zurcher, 1980).

In the area of evaluation, music education has lagged behind many of the other disciplines in methodology and credibility. Music has, for many years, seemed to many educators to be too subjective a discipline to qualify or quantify. Research and common practice has recently led to the development of concise behavioral and musical objectives that can, and indeed are fairly easily quantified and qualified (D'Aurellia,

1973; Davis, 1980; Kelly, 1982; Rosenthal, 1982; Yarbrough, et al., 1979). Some studies suggest the use of a systematic self-evaluation program as a means of reward for students (Davis, 1981; Furman, 1984; and Madsen & Madsen, 1970).

Behavioral observations using both checklists and videocassette recordings (Furman, 1984; Price, 1983; Spradling, 1985; Yarbrough et al., 1979) have proven effective in quantifying and qualifying defined musical and social behaviors in the music classroom setting. Also, in combination with both checklists and videocassette recordings, the use of multiple observers with tests of interobserver agreement has been very accurate (Fixsen et al., 1972; Price, 1983; Taebel & Coker, 1980; and Yarbrough, 1975).

Improvement and assessment of student attitude in the music classroom has been used in many studies to improve teaching effectiveness, reduce dropout rates, and reduce disruptive behaviors (Bodecker, 1969; Flanders, 1967; Furman, 1984; McCarthy, 1974; Nolan, 1973; and Price, 1983).

With the problems associated with experimental research carried on outside the laboratory, measures must be taken to reduce the effect of uncontrollable

variables. The pretest-posttest experimental design has been found to be the most suitable design form for use in the classroom. This allows differences in groups to be uncovered before the initiation of the experiment (Davis, 1981; Furman, 1984; MacKnight, 1975; Madsen & Madsen, 1978; Rosenthal, 1982; Whitener, 1983).

Assessment of musical achievement is and always has been highly problematic. The advent of the video-recorder and high quality audio-recorders has made it possible to review musical performances multiple times by any number of independent experts. The division of the myriad aspects of musical performance into specifiable, identifiable, defined objectives has also taken much of the subjective nature out of musical assessment (Carpenter, 1986; Dorow & Greer, 1979; Price, 1983).

Therefore, the purpose of this study will be to determine (a) if adherence, by a group of beginning wind instrumentalists, to a number of specified behavioral and musical objectives will lead to an increase in musical achievement, (b) to determine whether students that self-evaluate their adherence to those behavioral and musical objectives acquire those behaviors at a higher rate than students not involved in self-evaluation, and

(c) to determine whether the above treatments have any effect on students' attitudes toward music study.

CHAPTER TWO

Methodology

The purpose of this study was to examine the effect of self-evaluation, by beginning wind instrumental students, of defined musical and behavioral objectives. Specific areas in which effects were studied included attitude, physical playing fundamentals, and musical/technical skill development (playing). The specific attitudes that were examined included the student's attitude toward (a) school, (b) band, (c) their instrument, (d) practice, (e) their band director, and (f) self. The behavioral/musical objectives that were examined included (a) tone; pitch; rhythm; notes (technical accuracy); and playing position (including posture, embouchure, hand position); and (b) "practiced at home."

Subjects

The subjects (N = 57) were from the fifth grade beginning band at an elementary school in southwestern

Louisiana. Two classes (n = 28; and n = 29) were composed of students of approximately equal socioeconomic levels ranging in age from 10 to 12 years with approximately seven weeks of band class prior to the initiation of the experimental treatment. Subjects absent for four or more successive class meetings, or for a total of more than five days, or not completing all pre and posttest measures, were eliminated from the results of the experiment.

The woodwind class, numbering 34 students, was composed of 28 females and six males. There were 11 flutes, 15 clarinets, and eight saxophones. Preexperimental observation revealed a class that was well disciplined, highly motivated, and performing at a fairly high level considering the number of weeks of band class in which they had participated. By the end of the experimental period, six students had been eliminated from the statistical results of this experiment. One student had moved from the school district, one student had missed an excessive number of classes, and four students had not completed all of the necessary testing instruments.

The brass/percussion class, numbering 39 students, was composed of 35 males and four females. There were 13 trumpets, nine trombones, three baritones, three tubas, two clarinets, one saxophone, and eight percussion. The

saxophonist and two clarinetists were in the brass class because of scheduling conflicts with the woodwind class time. Preexperimental observation revealed that the brass class was, compared to the woodwind class, undisciplined and substantially behind in their playing skills. By the end of the experimental period two students had been eliminated from the statistical results of this experiment. One student had missed an excessive number of classes, and one student had not completed all of the necessary testing instruments. Although they participated in all of the testing procedures, percussionists were not a part of the results of this experiment.

Assignment of control and experimental status was determined by the investigator and the music teacher taking part in this project. It was determined that the brass class, which by the teacher's and the investigator's estimation was a problem class, would become the experimental group and that the woodwind class would serve as the control. While it would have been ideal to start the experimental period with two equal groups, the pretest-posttest design was chosen to eliminate the variables caused by preexperimental differences in the groups.

Clinicians and Preparatory Clinics

Instrumental music majors from a university in southwestern Louisiana served as clinicians for this study. Each clinician was a performer on the instrument for which they provided clinics. Clinicians attended two training sessions of approximately two hours in length to determine the exact nature of clinic observation and training in which they would be involved. During these training sessions, clinicians observed each other, modeled embouchure, hand position, horn position, tone, etc., and talked about corrective procedures. Lesson plans were distributed to all clinicians (see Appendix A) and "practiced." In the clinics, clinicians modeled musical objectives (embouchure, hand position, posture, tone, rhythm, pitch, and note accuracy) for their classes. Subjects were grouped heterogeneously as follows:

Clarinets - soprano

Flutes

Saxophones - alto

Trumpets

Trombones

Baritones/Tubas

Percussion

As a part of the preexperimental clinics, clinicians introduced the self-assessment forms to both the control and experimental groups. Examples were played by the clinicians and scored by the students, after which the clinicians discussed the scoring with the students. Clinicians were instructed to offer both "good" and "bad" examples of all of the behaviors included on the self-assessment instrument. Following discussion of the student assessment of the clinicians' performances, students were given an opportunity to evaluate their own playing and discuss that evaluation.

Preexperimental and Nonperformance Measures

Before the initiation of the experimental treatment, all subjects were given the following instructions by the investigator:

> "You and your teachers are all going to be involved in an experiment in self-evaluation. The method and results will have nothing to do with your final letter grade in this class.
>
> "One of the things that we will be doing is that all of your teachers and some observers will be watching and recording some of your classroom behaviors. Not only will the teachers and observers be recording your behavior, but some of you will be asked

to keep a daily record of those same things that we will be watching.

"To begin, we would like you to fill out a questionnaire on your attitude toward your school and your band class. The form is self-explanatory, but let's go over the first statement together so that everyone is certain that they understand what to do.

"The first statement is, 'Going to school at _____ is.' The choices for your answer are as follows:

(a) a lot of fun almost every day
(b) fun some of the time
(c) just OK
(d) not much fun

"If you really enjoy going to school at _____, then you should circle 'a lot of fun almost every day' (done on board for students to see). If you do not like going to school at _____ _____ you should circle 'fun some of the time' (done on board). If you have no strong feeling about _____ _____ you should circle 'just OK' (done on board). If you do not like school at _____, you should circle 'not much fun,' Are there any

questions about answering the survey?"

At this point , subjects completed the Attitude Survey (see Appendix B).

"Now that we have all answered the questions on our forms, get a little warm-up period and play a few lines" (taped).

Pretest in Performance

In addition to the Attitude Survey, two playing pretests, a group and individual pretest, took place before the initiation of the experimental treatment. Pretest materials were taken from the Belwin Elementary Band Method for beginning band, written by Fred Weber and edited by Nilo Hovey. Selection of specific pretest materials within the text were achieved through an analysis of the progress of each group's preexperimental activity. A decision as to materials appropriate for the groups within the scope of their progress was then made by the investigator and the teacher. Materials for the group pretest were equivalent to approximately one-half page from a standard heterogeneous beginning wind class method. Materials for the individual pretest were equivalent to approximately one line from a standard heterogeneous beginning wind class method.

The pretest was performed by the control and experimental groups within their individual classroom settings under the direction of their teacher. Each group was allowed a ten minute warm-up period before their performance pretest and was given the following instructions:

> "As a class, you are now going to perform a number of lines from your method book. You and your teacher should not stop during the playing of a line, and you will only play each line one time. Please play each line the very best that you can."

Individual playing pretests took place in a private setting. Players were excused from class by section and played one line, selected by the investigator and their teacher, from the Belwin Elementary Band Method. Each student was given the following instructions:

> "You are now going to perform a line from your method book. You should not stop during the playing of the line, and you will only play the line one time. Please play the line the very best that you can."

Pretest adjudicators used a weighted adjudication form provided by the Arkansas School Band and Orchestra Association (see Appendix D). The form weights factors of performance in the following manner: (a) tone--20,

(b) pitch--10, (c) rhythm--10, (d) technical accuracy--10. The ASBOA form also included rating scales for musical expression, sight-reading, and scales. Those sections were deleted for the purposes of this study.

Pretest recording was done with a Sony WM D6 stereo cassette player/recorder with Dolby Noise Reduction. The microphone used was the Sony model ECM 101 Electro Condenser microphone. Maxell XL II Chromium Dioxide tape was used for media storage. All tape adjudicators listened to a copy of the original tape made on a JVC KD W55 cassette copy deck. Tape adjudicators also listened to the tapes in the same room and on the same equipment. Playback equipment included a Sony WM D6 stereo cassette player/recorder, a Denon 50 watt RMS stereo amplifier, and Advent accoustic suspension speakers. Although recording acoustics did differ from room to room, extreme care was taken to make recording circumstances as similar as possible. Recording levels and microphone setups were monitored carefully so that each group and individual recording was acoustically as similar as possible. The order of each group's and individual's appearance on the tape was randomized. Adjudicators for the performance tapes were selected from currently active instructors of beginning instrumentalists (see Appendix C).

Outside experts had no knowledge of the nature of the experiment until after the completion of their adjudication.

Daily Experimental Procedures

Both groups used the Belwin Elementary Band Method for beginning band as their class text. The teacher was monitored and instructed to maintain as similar a pacing as possible in the two groups of materials covered throughout the experimental period. Other than the addition of the preexperimental clinics, the behavioral assessment forms, and the student's activity associated with the assessment, both groups continued their preexperimental classroom procedures.

The experimental group performed daily self-evaluation of specified behavioral and musical objectives. The behavioral/musical objectives and/or dependent variables were (1) "on task" which was divided into four musical behavioral and one behavioral category: (a) tone; (b) pitch; (c) rhythm; (b) notes (Technical Accuracy); (e) playing position (included posture, embouchure, hand position), and (b) "practiced at home." The control group received teacher evaluation of the same musical/behavioral objectives with the traditional teacher feedback of general

comments to the class from the podium, and individual help and comments when deemed necessary.

The self-assessment forms (see Appendix E) were passed out to the experimental group on a daily basis. Each student was asked to evaluate the selected behaviors four times daily. This took place at the beginning of class during approximately the first ten minutes. During this first ten minutes students were undergoing a review of the materials covered the previous day and assigned for practice. Their self-evaluation was an evaluation of one particular line per group of evaluations, and they repeated this procedure for four lines. Their practiced at home evaluation consisted of checking their practice activity for the preceeding night. After the completion of the four evaluations and the home practice evaluation, the experimental group put their evaluations under their chairs and finished class in the "traditional" manner.

The control and experimental groups underwent daily evaluation from both their teacher and the investigator. Video taping took place every day. Video tapes were reviewed and scored for both classes as to the attainment of the behavioral and musical objectives at the end of the experimental period by the team of four experts (see Appendix F).

After the initial attitude questionnaire and individual and group recordings were completed, the experimental group was reintroduced to the self-assessment instrument. Instructions were given by the investigator and included the following:

"We are about to begin the experimental portion of this project. The worksheet that we have just given should have a label at the top that includes your name, age, and instrument. Please check that label and make sure that all the information is correct. You will be given one of these worksheets every day for the next twenty days.

"Lets look over the worksheet and learn how to mark each section. As you can see, your sheet has three boxes on the front and one box on the back. Each of these boxes represents one of four lines that you will play at the beginning of your class period. You will use one of those boxes to evaluate one of the four lines that you play every day for review.

"Lets play a line and go over the evaluation in the first box on your sheet. (Class plays a line). Now lets look at number one in your first box and give yourself a score for your tone on the line we just completed. If your tone was very good, or character-

istic of your instrument, draw a line through 'very good.' If you thought that your tone was characteristic but not the best it could be, you should mark either 'good' or 'OK.' If you were not pleased with your tone you should mark 'poor,' and if your sound was very uncharacteristic you should mark 'very poor.'

"Now continue as you did in your clinic classes to mark your self-evaluation forms for pitch, rhythm, notes, posture, embouchure, and hand position. Are there any questions?"

Students in the experimental group were monitored daily, as to the accuracy of their evaluations. Both the investigator and the teacher monitored individual and group assessment in class during student self-assessment periods. Possible discrepancies were noted with the class or with individual students and corrected when necessary.

Midexperimental Performance Test

At the end of ten days of the experimental procedure, all students were again asked to perform materials from the Belwin Elementary Band Method for beginning band. The material for the group performance test was again of

approximately one-half page in length and selected by the investigator and the teacher.

Again, each class performed within their normal classroom settings and were given a ten minute warm-up before their performance. Before the performance each group was given the following instructions:

> "As a class, you are again going to perform a number of lines from your method book. You and your teacher should not stop during the playing of a line, and you will only play each line one time. Please play each line the very best that you can."

Again, the materials were recorded, copied, randomized, and retained for the outside panel of adjudicators. The performances were judged using the same form as was used in the pretest examination.

Posttesting

At the end of the twenty days of classes, a final performance and attitude testing instrument was administered to each individual class under the same circumstances as the pretest and midexperimental test.

Assessment of Videotapes

Assessment of video tapes of rehearsals was done by four experts in wind instrumental instruction from various

universities at the conclusion of the experiment (see Appendix H). For assessment training purposes, selected prerecorded videotape segments of middle school beginning band students in rehearsal situations were viewed and discussed by the faculty as a group. Following the first viewing and discussion, another selected videotape was viewed, and the faculty scored the students' on-task/off-task behaviors. The behavioral assessment sheets (see Appendix F) were then scored, interobserver agreement checked, and disagreements discussed. This procedure was repeated until an interobserver agreement of at least 0.90 was obtained. Throughout the adjudication process, breaks were scheduled for discussion of the procedure and comparison of scores.

Adjudication of Performance Tapes

All performance tapes were held until the end of the experiment. At the end of the experiment, the tapes were taken with the necessary adjudication forms to the three outside adjudicators. All of the performances were numbered for the purpose of group and individual identification, and copies of the materials taken from the Belwin Elementary Band Method for the performances were included for the adjudicators.

Along with the tapes, the performance materials, and the adjudication sheets, the judges received the following instructions:

> "The tape that you are about to hear is of a number of performances of beginning band students. The performances are of individuals and groups, and have been copied in random order. We will listen to each recording of each group and individual only once, and use the enclosed, numbered adjudication forms to assess the performances. Please do not discuss your evaluations or scores, but try to be consistent within your own range of scoring. Each group and individual on the tape is announced by the number of order of performance, and you should use the corresponding adjudication sheet. Do not total any sheet; only mark the appropriate line for each of the factors to be judged."

All adjudicators were university faculty and were active in the field of instrumental music education (see Appendix H).

CHAPTER THREE

Results

The purpose of this study was to examine the effect of self-evaluation, by beginning wind instrumental students, of defined musical and behavioral objectives. Specific areas in which effects were studied included attitude, physical playing fundamentals, and musical/technical skill development (playing). The specific attitudes that were examined included the student's attitude toward (a) school, (b) band, (c) their instrument, (d) practice, (e) their band director, and (f) self. The behavioral/musical objectives that were examined included (1) tone; pitch; rhythm; notes (technical accuracy); and playing position (including posture, embouchure, and hand position); and (2) "Practiced at Home."

To determine whether there was a significant difference between acquisition of behaviors in the

self-evaluated groups versus the control groups, videotape observer scores for experimental groups and control groups were tallied for each day. A percentage of on-task was determined for each day (see Appendices I, J, and K).

To determine whether there was a significant difference between attitude scores, both on individual questions and on total, of the experimental and the control groups, t-tests were conducted on data from within both control and experimental groups to see if there was significant change from pre to postexperimental attitude scores.

Audio tape score data analysis was performed by t-test of individual scores comparing experimental to control in both pre and postexperimental scores and difference scores pre to postexperimental.

Interjudge Reliability

Adjudicator concordance, or interobserver agreement for audio tapes, was computed using the Kendall Correlation Coefficient. Results demonstrated high agreement among judges for group ($W = .559$; $df = 17$; $n = 18$; $X^2 = 29.62$; $p < .05$) and individual ($W = .511$; $df =$

29; n = 30; X^2 = 45.47; p < .05) scores. Adjudicator concordance for audio-tape assessments was calculated using all of the group scores and 30 percent of the individual scores.

Adjudicator concordance for videotape assessments was computed using the formula of agreements divided by agreements plus disagreements. Each category of observation was calculated separately, and then all categories were combined to reveal an overall percentage of agreement. Thirty percent of video assessment scores were used to calculate interobservor agreement.

Table 1. Percentage of adjudicator agreement

Embouchure	91.2 %
Hand Position	90.4 %
Posture	91.3 %
Composite (Embouchure, Hand-Position, Posture)	91.0 %

Analysis of Video Observational Data

Tables 2 through 4 show graphic representations of on-task percentages for both the control and experimental groups. Videotaping was done on sixteen of the twenty

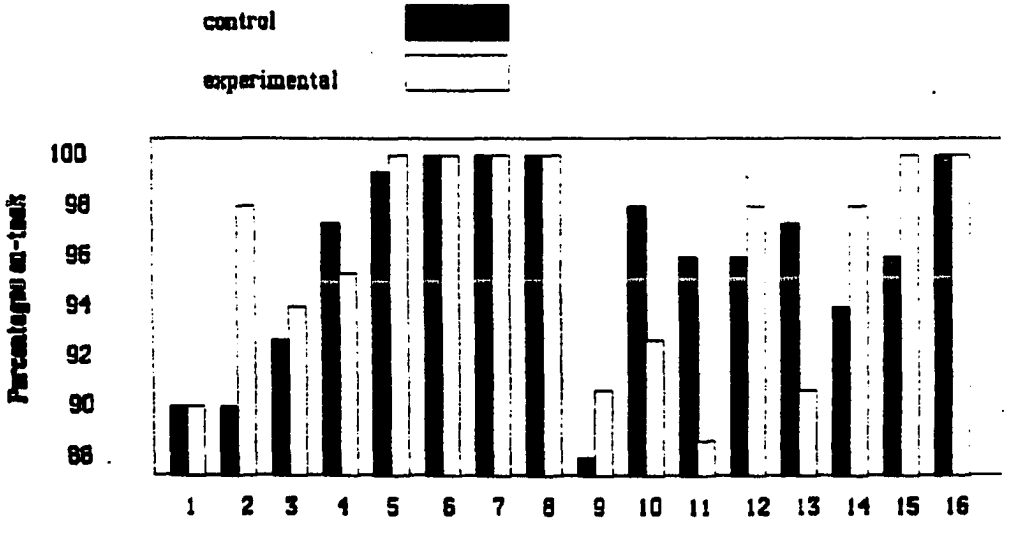
days of the experimental period, as shown on the sixteen successive bars in the graphs.

On-Task data was collected over a period of sixteen days through the use of videotaping. Four expert adjudicators watched 219 thiry-second segments of video which represented observations of 358 brass and 364 woodwinds. Original video data were edited from 8mm videotape to the VHS format tape. Each 30 second segment consisted of 10 seconds of still frame (stop action of subjects while performing), 10 seconds of performance, and 10 seconds of still frame (again, stop action of subjects while performing). Raw data consisted of the number of students in view within a particular 30-second segment, judged by each expert to be either on or off-task in each of the three particular areas of concern. Totals from the four adjudicators in each of the areas were combined for each day of taping, and the total on-task was divided by the number of observations. Percentage scores for each of the 16 days and in each of the three areas and for both control and experimental groups are represented in Tables 2 through 4.

Percentages in the category of posture for both groups indicated a high level of on-task throughout the

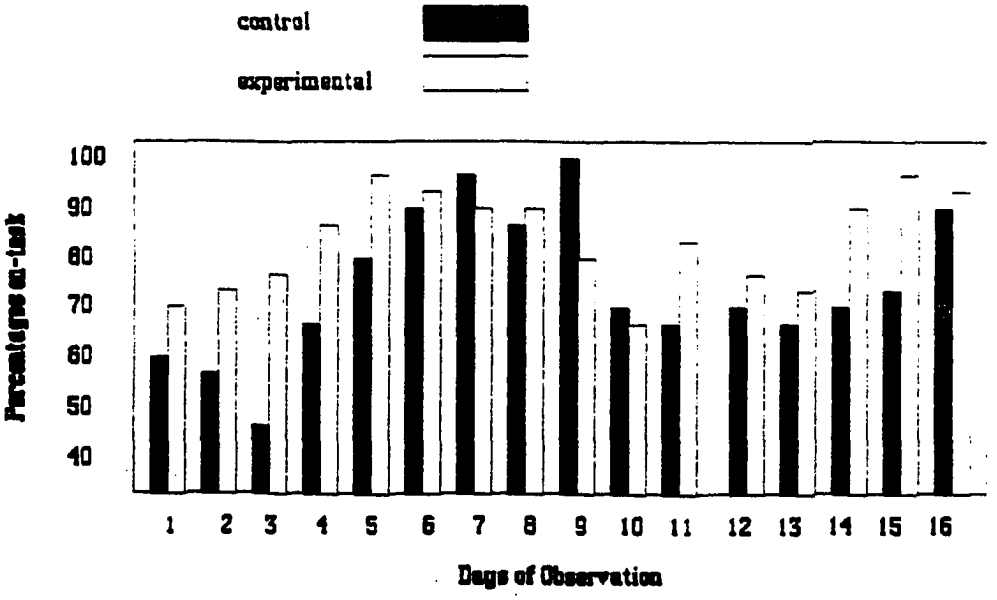
experimental period (see Table 2). Significant depressions in on-task posture percentages occurred in both groups around days nine through 13. This depression coincides with the holiday and teacher conference break that took place during the experimental period (see Appendix G). Percentage means in posture revealed a higher on-task rate for the experimental group (96%) than for the control group (95). Data also revealed improvement in posture on-task in both groups during the experimental period.

Table 2. Daily on-task percentages in posture for control and experimental



Percentages in the category of embouchure on-task were considerably lower than percentages in the posture category (see Table 3). Mean percentage scores for the experimental group (84%) were higher than for the control group (74%). The bar graphs for embouchure on-task indicate a pattern similar to that of the depressed scores of the posture category during the middle of the experimental period, and again as in the posture totals, scores in the embouchure category indicated improvement from the beginning of the experiment to the end of the experiment.

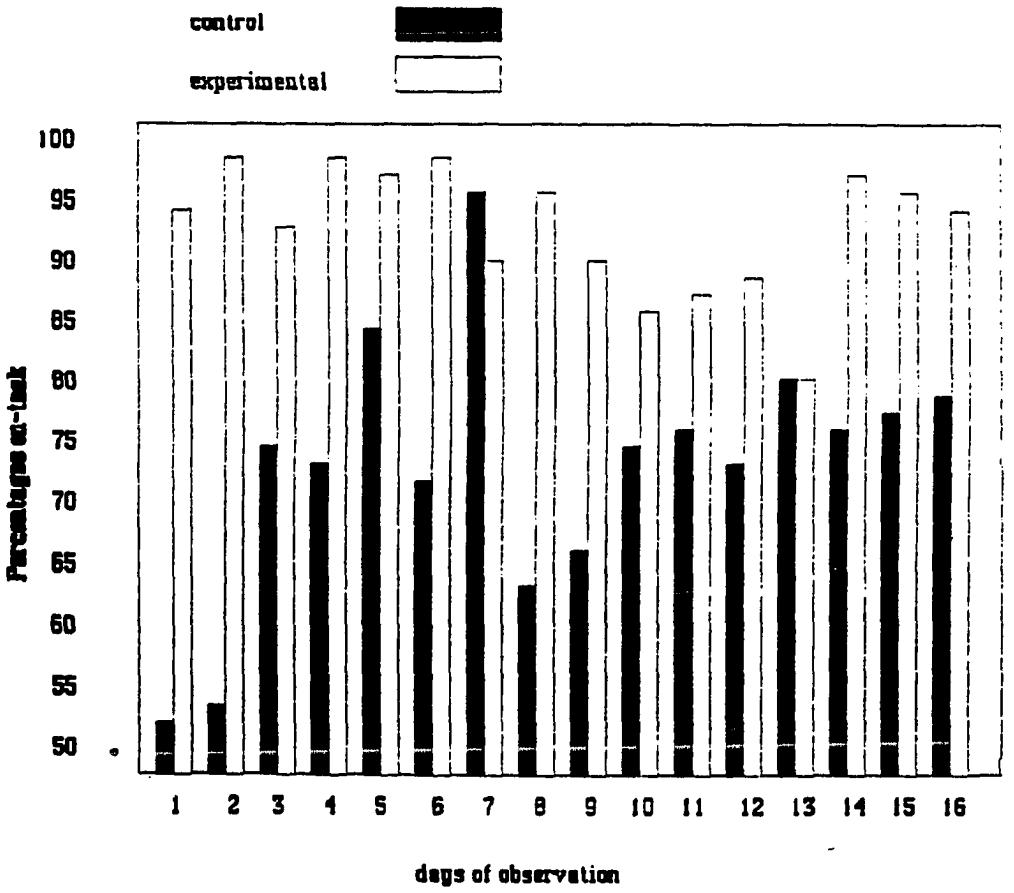
Table 3. Daily on-task percentages in embouchure for control and experimental



Percentages in the category of hand position indicated a significantly higher on-task result in the brass control group (see Table 4). Mean percentages in the experimental group were 87%, while mean scores in the control group were 74%. As is evident from the bar graph in Table 4, the brass began the experimental period with a considerably higher level of on-task and ended the experimental period with a higher level of on-task.

Again, the midexperimental depression exists in the hand position percentage scores.

Table 4. Daily on-task percentages in hand postion for control and experimental



Again, looking at the bar graphs (see Tables 2 - 4), both groups in each of the three categories followed a similar pattern of on-task percentages. An upward pattern was established throughout the first nine to 10 days, followed by a depression and another steady upward trend.

Analysis of Attitudinal Data

Responses on the attitude survey (see Appendix B) were rated on a four point, inverse Likert scale. Paired (pre-post), one-tailed t-tests were run on individual question responses for both the experimental and control groups. Table 5 shows each question in the survey, the paired t-value achieved when comparing the pre to post scores, degrees of freedom, and the probability level for each t-value.

Table 5. Comparisons between pre and posttest ratings for control and experimental groups for each question on the attitude survey

1. Going to school at _____ is:
   a) a lot of fun almost every day
   b) fun some of the time
   c) just OK
   d) not much fun

	t	df	P
Control	-.62	27	.27
Experimental	.42	28	.34

2. Coming to band class is:
   a) a lot of fun almost every day
   b) fun some of the time
   c) just OK
   d) not much fun

	t	df	P
Control	.49	27	.31
Experimental	2.17	28	.02*

3. Compared to other instruments, my instrument is:
   a) a great instrument to play
   b) a pretty good instrument to play
   c) just OK to play
   d) not a very good instrument to play

	t	df	P
Control	-2.29	27	.01*
Experimental	-1.24	28	.11

4. I practice my instrument at home:
   a) almost every day
   b) 3 or 4 times a week
   c) once a week or less
   d) only during band class

	t	df	P
Control	.83	27	.21
Experimental	1.98	28	.03*

5. Practicing my instrument is:
   a) a lot of fun almost every day
   b) fun some of the time
   c) just OK
   d) not much fun

	t	df	P
Control	-.18	27	.43
Experimental	1.35	28	.09

6. I think that my band director is:
   a) a very good teacher
   b) a good teacher some of the time
   c) an OK teacher
   d) not a very good teacher

	t	df	P
Control	.59	27	.28
Experimental	2.26	28	.01*

7. Compared to the other students in band, I think I am:
   a) a very good player
   b) a pretty good player
   c) about an average player
   d) not a very good player

	t	df	P
Control	.44	27	.33
Experimental	1.55	28	.07

* significant at p <.05 level

Control group data from the attitude survey revealed that there were deteriorations in several of the attitude scores over the experimental period. In questions one, three, and five, pertaining to attitude toward the school, their instrument and practice scores indicated varying degrees of decline. Statistically significant decline occurred on question three which dealt with

student satisfaction with the instrument that they had selected. The statistically significant decline in instrument satisfaction in the control group could be due to the abatement of the novelty effect of a new instrument.

Experimental group data from the attitude survey revealed that there was deterioration in only one category, that of instrument satisfaction, and that deterioration in the experimental group was substantially less than the deterioration in the control group. Improvement was noted in every other attitude question, including statistically significant improvement in questions two, four, and six, which pertained to attitudes toward band class, frequency of practice at home, and the student's attitude toward their band director.

Data in Table 6 is based on a composite score for the attitude questionnaire pre to postexperimental period. Table 6 reveals that the control group exhibited no statistically significant difference in overall attitude, while the experimental group experienced a statistically significant improvement from pre to postexperimental scores.

Table 6. Comparisons between pre and posttest for the experimental and control group for a composite score from the attitude questionnaire

	t	df	P
Control	.60	27	.28
Experimental	2.77	28	.005*

* significant at p <.05 level

The postexperimental attitude survey used in the experimental group included two questions not asked on the preexperimental instrument. These questions were:

8. Doing the self-evaluation forms in band was:
   a) a lot of fun almost every day
   b) fun some of the time
   c) just OK
   d) not much fun

9. Doing the self-evaluation forms in band was:
   a) very helpful in the improvement of my playing
   b) helpful in the improvement of my playing
   c) not helpful in the improvement of my playing
   d) harmful to the improvement of my playing

Responses to question eight were somewhat negative, with 53 percent of the experimental group responding with either answer "c" or "d". With the response to question eight, the responses to question nine were somewhat surprising. Only 7% indicated the most negative response, whereas 75% of the group responded to question nine with the positive "a" or "b" responses.

Analysis of Performance Scores

Individual performance scores were obtained through assessment of audio tapes by three expert adjudicators. Adjudicators rated individual performances using a weighted assessment form provided by the Arkansas School Band and Orchestra Association (see Appendix D). Pitch, rhythm, and technical accuracy were scored from zero to ten points, and tone was scored from zero to twenty. Scores from the three adjudicators were totaled for pitch, rhythm, technical accuracy, and tone. Finally, a sum of those area totals was computed for a total performance score and preexperimental to postexperimental difference scores were calculated.

Table 7 shows preexperimental means from each area of performance investigated and a preexperimental performance total, the unpaired t-value achieved when comparing experimental to control, degrees of freedom, and the probability level for each t-value.

Table 7. Comparison of control and experimental group performance scores on preexperimental test

Tone

	Mean	t	df	P
Control	20.62	-1.02	55	.16
Experimental	18.41			

Pitch

	Mean	t	df	P
Control	11.03	-1.91	55	.03*
Experimental	8.94			

Rhythm

	Mean	t	df	P
Control	14.33	-1.42	55	.08
Experimental	12.65			

Technique

	Mean	t	df	P
Control	13.43	-1.77	55	.04*
Experimental	11.18			

Performance Composite Total

	Mean	t	df	P
Control	58.98	-1.63	55	.05*
Experimental	50.28			

* significant at p <.05 level

Comparison of preexperimental performance scores (see Table 7) reveals statistically significant differences between control and experimental groups in the categories of pitch and technique. Comparisons of

preexperimental mean scores show the control group considerably ahead of their experimental counterparts in each of the four areas of performance with a statistically significant difference in the composite performance total score.

Table 8 shows postexperimental means from each area of performance investigated and a postexperimental performance total, the unpaired t-value achieved when comparing experimental to control, degrees of freedom, and the probability level for each t-value.

Table 8. Comparison of control and experimental group performance scores on postexperimental test

Tone				
	Mean	t	df	P
Control	20.21	-.62	55	.27
Experimental	18.89			
Pitch				
	Mean	t	df	P
Control	10.88	-.41	55	.34
Experimental	10.42			
Rhythm				
	Mean	t	df	P
Control	13.55	.15	55	.44
Experimental	13.75			

Technique

	Mean	t	df	P
Control	13.13	-.07	55	.47
Experimental	13.05			

Performance Composite Total

	Mean	t	df	P
Control	57.45	-.34	55	.37
Experimental	55.72			

* significant at p <.05 level

Comparison of postexperimental performance scores (see Table 8) reveals no statistically significant differences between control and experimental groups. Comparisons of postexperimental mean scores show the control group only slightly ahead of their experimental counterparts in three of the four areas of performance investigated and slightly behind in the area of rhythm. Postexperimental performance composite scores show the experimental group only slightly behind the control group overall, and without a statistically significant composite performance score difference.

The pre and postexperimental performance scores were then examined as to the difference between scores. Postexperimental scores were subtracted from preexperimental scores to obtain a difference score.

These difference scores were then examined for statistical significance utilizing an unpaired t-test.

Table 9 shows difference score means from each area of performance investigated and a performance difference total, the unpaired t-value achieved when comparing experimental to control, degrees of freedom, and the probability level for each t-value.

Table 9. Comparison of control and experimental group performance preexperimental to postexperimental difference scores

Tone Difference

	Mean	t	df	P
Control	-.41	.34	55	.37
Experimental	.48			

Pitch Difference

	Mean	t	df	P
Control	-.15	1.33	55	.09
Experimental	1.48			

Rhythm Difference

	Mean	t	df	P
Control	-.77	1.36	55	.09
Experimental	1.10			

Technique Difference

	Mean	t	df	P
Control	-.26	1.78	55	.04*
Experimental	1.87			

Performance Composite Total

	Mean	t	df	P
Control	-1.57	1.27	55	.11
Experimental	5.43			

* significant at p <.05 level

Comparison of control and experimental performance difference scores (see Table 9) reveals statistically significant differences between control and experimental groups in the category of technique. Comparisons of mean difference scores show an improvement in every facet of performance for the experimental group with slight declines in the control group scores.

Group performance score results tend to follow, quite closely, the results of the preceeding individual performance scores. Group performance tests were administered during preexperimental, midexperimental, and postexperimental periods. Mean scores for the three group performance tests are contained in Table 10.

Table 10. Mean scores of group performances from pre, mid, and postexperimental periods.

Group	Pre	Mid	Post
Control (n = 27)	7.80	8.92	9.37
Experimental (n = 28)	7.00	11.00	9.79

Mean scores revealed that the control group preexperimental group scores were higher, while the postexperimental scores were lower in relation to the experimental group scores. Also evident is that the learning curve for the two groups was very different, with the control group exhibiting a straight line performance improvement, and the experimental group exhibiting a rapid improvement from preexperimental to midexperimental scores with a small decline from midexperimental to postexperimental scores.

Summary of Results

Data from video observation of student on-task revealed highest percentages for both groups in the posture category. The category with the largest difference between control and experimental groups was that of hand position, with the control group's overall percentage at 74% and the experimental group's overall percentage at 93%. The decline in scores toward the middle of the experimental period was probably caused by the holiday and teacher conference break (see Appendix G).

The pre and postexperimental attitude surveys also yielded a number of statistically significant results.

The control group data revealed a marked decrease in instrument satisfaction from pre to postexperimental surveys, with no other statistically significant results. The experimental group data revealed statistically significant improvement from pre to postexperimental surveys in the frequency of practice at home, the student's attitudes toward band class and their band director, and the composite score for the attitude questionnaire.

Performance data revealed significant differences between control and experimental groups' preexperimental scores in the categories of pitch and technique. The control group's scores were higher in every preexperimental performance category and were significantly higher in the composite performance score. Although the control group did exhibit higher mean scores in three of the four areas of postexperimental performance and in the overall postexperimental performance composite score, postexperimental performance data revealed no significant differences between control and experimental groups. In the category of rhythm, the experimental group postexperimental mean score was higher than the control group. Difference scores of pre to

postexperimental performance revealed a significant difference between control and experimental scores in the area of technique, with the mean score for the experimental group improving almost two points.

CHAPTER FOUR

Discussion

The purpose of this study was to examine the effect of self-evaluation, by beginning wind instrumental students, of defined musical and behavioral objectives. Specific areas in which effects were studied included attitude, physical playing fundamentals, and musical/technical skill development (playing). The specific attitudes that were examined included the student's attitude toward (a) school, (b) band, (c) their instrument, (d) practice, (e) their band director, and (f) self. The behavioral/musical objectives that were examined included (a) "on-task," which was divided into five categories: tone; pitch; rhythm; notes (technical accuracy); and playing position (including posture, embouchure, hand position); and (b) "practiced at home."

Discussion of the Results of the Study

Adjudicator agreement was relatively high throughout both judging procedures. Both the videotape and audiotape adjudication took place with all judges working simultaneously. This allowed the investigator to monitor the adjudication and to have discussion breaks where necessary. It is this investigator's feeling that adjudication of videos of this nature necessitates that all judges work together with the investigator.

Adjudication of the videotape was very lengthy and arduous to the point that it might have contributed to anomalies in the outcome of the adjudication. Filming within the standard heterogeneous instrumental class setup was also quite difficult. This somewhat awkward situation added to the difficulties in adjudication of the embouchure and hand position captions. Adjudicators of the videotapes agreed that, by far, the easiest caption to observe and score was that of posture and that the most difficult was that of embouchure, especially in the flutes. Not only is the flute aperture difficult to see because of its' small size, but it is also extremely difficult to obtain an angle in the videotaping procedure

that will expose the aperture for adjudication without disrupting class proceedings.

Daily on-task percentages from adjudication of the videotapes indicated a notable depression in both groups at approximately the midpoint of the experiment. This could have been the result of either the abatement of the "halo effect," caused by the onset of the experiment and/or the novelty of having class filmed, or the break in the school schedule caused by the Thanksgiving Holiday and a teacher conference day. Although not statistically significant, the experimental group began the experimental period with a higher on-task percentage than the control group. This is in inverse relationship to their performance scores and would seem to be somewhat of a contradiction except when taking into account the more ackward nature of the woodwind instruments in both the areas of embouchure and hand position. At the end of the experimental period, both groups showed significant increases in on-task percentages in all categories, which again is somewhat contradictory to the individual performance scores. This contradiction is probably the result of the fact that musical achievement in performance is a "moving target" or a goal with changing

criterion, while the areas of hand position, embouchure, and posture are more stable goals.

Results of the attitude survey indicated a mixed result in attitude change from pre to postexperimental scores in the control group. Mean scores for questions one, three, and five indicated a deterioration in attitude, while the mean scores of questions two, four, six, and seven indicated an improvement in attitude. The composite attitude score for the control group indicated an almost consistent score in overall attitude during the experimental period.

Results for the experimental group attitude scores indicated an improvement of mean scores on every question on the attitude survey, with the exception of the question dealing with instrument satisfaction. Instrument satisfaction declined in both groups more rapidly than any of the other attitude measures, again possibly the product of the decline in the novelty effect of a new instrument. Statistically significant improvements in the experimental group occurred in their attitudes toward band class, practice, and their band director.

As stated in Chapter II, the experimental group was so designated because of their band director's desire to see if the treatment would have any effect on a class that he considered to be behind in every facet of band class development. In the opinion of this investigator, the self-evaluation treatment did indeed make a substantial difference in the attitudes of the experimental group, and this in turn made a substantial difference in the attitude of their teacher. This particular teacher's approach to the teaching of beginners was of a very positive nature which was reflected in the lack of any significant decline in the attitudes of either of the groups during this very critical period in their development.

The results of the two additional questions asked the experimental group were somewhat of a contradiction. Although they did not particularly enjoy doing the self-evaluation forms, they did think that the forms were an effective tool in the improvement of their playing.

Performance adjudication of individuals revealed almost no change of pre to postexperimental scores in the control group. The control group began the experimental period at a significantly higher performance level than

did the experimental group, but ended the experimental period at approximately the same performance level as the experimental group. Experimental group individual performance scores revealed a significant change from pre to postexperimental measures in the area of technique, and positive changes in all of the other areas and composite scores.

The static nature of the results of the control group performance scores was probably misleading, in that music performance criteria, throughout the learning process, is always increasing in difficulty and complexity. The technique and rhythm skills required in playing the material for the preexperimental performance test were less demanding than those required in the postexperimental performance test. This increased level of difficulty in certain areas can have a deleterious effect on the overall impression of performance ability. Both groups definitly seemed to improve over the course of the experimental period.

Group performance scores revealed a similar pattern of change and a similar relationship between the groups from pre to postexperimental measures. Group scores included midexperimental measures which reflected

learning curves for both groups. While the control group performance followed a straight line of improvement, the brass scores revealed a significant increase to the mid-experimental point with some deterioration in the post-experimental scores. This could possibly be due to an increased halo effect in the experimental group, caused by the institution of the treatment. Group performance scores seemed to reflect, more accurately, the improvement in performance that took place over the experimental period.

It would seem, in the opinion of this investigator, that the institution of the self-evaluative treatment did indeed have a significant effect on the experimental group and on their teacher. Students seemed happier, more willing to work, and more willing to correct behavior and strive to be better players. It also seemed that daily classroom performances, especially in the experimental group, improved considerably during the experiment. The attitude of their band director, already very positive, also seemed to improve substantially over the experimental period, and again it seemed most evident in relation to the experimental group.

Comparison to the Literature

Did the institution of self-evaluative procedures affect student attitude? The data drawn from this study and this investigator's opinion, drawn from personal observation, support the conclusion that the attitudes of the experimental group were positively affected by the institution of self-evaluation in the classroom, and that, as Leonard and House (cited in Davis, 1981) stated, student attitudes determine to a large extent the attainment of educational objectives. Attitudes did seem to influence the learning trends and the effectiveness of the teacher in the case of this particular study. Other studies such as Rosenthal (1982), and Davis and Rand (1980) also came to the conclusion that the self-evaluative procedure leads to improved student attitude.

Did the institution of self-evaluative procedures affect the student's musical performance abilities? The data drawn from this study would tend to support the conclusion that the performance abilities of the experimental group were positively affected by the institution of self-evaluation in the classroom. Experimental group performance scores, both individual

and group, indicated significant improvement due to the self-evaluative treatment. Furmans' study (1984) of guitar students learning to accompany singing activities, revealed significant positive differences in experimental groups using a self-evaluative checklist of specified behaviors. Madsen and Madsen (1970), and Johnson and Martin (1971) found that the possibility of positive self-assessment by the student was sufficient reinforcement to effect positive student change. Davis (1981) also found a positive effect from self-evaluation in the performance abilities of eighth grade band students.

Did the institution of self-evaluative procedures affect student' performance in observable behavioral tasks? The data drawn from this study would tend to support the conclusion that on-task rates for students undergoing self-evaluation tend to be higher (see Appendixes I, J, and K). Composite mean percentage scores of on-task were higher for the experimental group (89%) than for the control group (81%). This seems to support the conclusion reached by Forsythe (1977) and Pricket (1983) that an active role in the educational process for the student would lead to a lower frequency

of off-task, and by Rosenthal (1982) that with adequate a priori definition of behaviors, self-evaluation is a highly effective teaching tool. Zurcher (1980) found that on-task rates in a variety of areas for eighth grade band students were significantly higher during self-evaluative periods, and Yarbrough et al., (1979) noted a similar effect on university conducting students. The results of this study would also possibly lead one to conclude that, as Johnson and Martin suggested in a 1971 study, self-evaluation serves as a reinforcing or contingent rewarding element for the students.

Problems Associated With This Study

This study began with 32 control and 35 experimental students participating. Four control and six experimental students were eliminated because of either absences in excess of four, failure to complete all test instruments, or, in the case of two experimental students, moving out of the school district during the experimental period. This left a total subject count of 57 with 28 control and 29 experimental subjects.

The experimental period was interrupted by a two day holiday and a one day teacher consultation period. The

time frame of the experiment was also extended because the band director used Fridays for individual playing examinations, thereby eliminating the possibility of class self-evaluation on those days.

Videotaping was very difficult within the standard setup of a beginning band class. Some sections and/or individuals were very easy to film while others were almost impossible. Although the agreement of the adjudicators of videotapes was in the 90% range, videotaping circumstances were less than ideal.

Although not included in this study, beginning percussionists were a part of the experimental class. They participated in the clinics, were given the attitude assessments, and were given self-evaluation forms every day. They were not told that they were not a part of the results of the experiment. The effect of the presence of the percussion section in the daily classroom setting is unknown. Adjudicators for the audiotapes were asked to ignore the presence of percussion on the group playing examples. In addition to the percussion section, there were three students who played instruments that would normally be included in the control group class that, because of scheduling problems, were in the experimental

class. These students were included in the experiment and the statistical results of this study.

Implications for Future Research

The use of self-evaluation in this study seems to have proven to be a very effective focusing tool in the classroom setting at this particular elementary school. The conclusion that self-evaluation was effective in improving attitude, performance, and behavior in the specific conditions of this study, can be generalized to other populations only in a very limited sense without further experimentation. Future studies in self-evaluation that began with control and experimental populations more similar would allow more generalization of the results to other populations. Studies in self-evaluation should also investigate the effect of prolonged evaluation and the maximum effective time frame for self-evaluative procedures. A variety of adjudication procedures in the areas of performance and on-task in studies of this nature could also lend further validity to the efficacy of self-evaluation.

Other areas of further research suggested by the results of this study could include a study of the

possible effects of holiday or out-of-class time on the learning process, to develop more palitable self-assessment instruments for use in music classes, and to examine the effect of self-evaluation on student retention.

With evaluation and accountability becoming more and more important in the public and private school settings, music educators must develop more effective means of accomplishing the evaluative task. This would help bring music back into the mainstream of "academic subjects" and prevent the slide of music into the extracurricular category of school offerings.

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APPENDIX A

CLINIC LESSON PLAN

LESSON PLAN FOR PREPARATORY CLINICS

I. Introduction of clinic faculty.

II. Faculty performance "modeling" of selected excerpts from beginning method.

III. Evaluation and necessary correction of posture, horn position, hand position, etc.

IV. Listen to each student, evaluate embouchure and make necessary corrections.

V. Model correct posture, horn position, hand position, embouchure, and sound using selected excerpts from beginning method.

VI. Have class "copy" your playing.

VII. Repeat Modeling.

VIII. Repeat class copying.

IX. Introduce and explain self-evaluation forms.

X. Model selected excerpts for class evaluation using forms. Include positive and negative examples.

XI. Discuss evaluations.

XII. Have class play excerpt.

XIII. Have class evaluate excerpt.

XIV. Take up self-evaluation forms.

APPENDIX B

STUDENT ATTITUDE ASSESSMENT FORM

STUDENT ATTITUDE ASSESSMENT

Name_____

I play the _____.

For each of the following items, circle the answer that best describes your feelings about school and being in band.

1) Going to school at is:

a) a lot of fun almost every day
b) fun some of the time
c) just OK
d) not much fun

2) Coming to band class is:

a) a lot of fun almost every day
b) fun some of the time
c) just OK
d) not much fun

3) Compared to other instruments, my instrument is:

a) a great instrument to play
b) a pretty good instrument to play
c) just OK to play
d) not a very good instrument to play

4) I practice my instrument at home:

a) almost every day
b) 3 or 4 times a week
c) once a week or less
d) only during band class

5) Practicing my instrument is:

a) a lot of fun almost every day
b) fun some of the time
c) just OK
d) not much fun

6) I think that my band director is:

a) a very good teacher
b) a good teacher some of the time
c) an OK teacher
d) not a very good teacher

7) Compared to the other students in band, I think I am:

a) a very good player
b) a pretty good player
c) about an average player
d) not a very good player

APPENDIX C

LIST OF ADJUDICATORS FOR PERFORMANCE AUDIO TAPES

List of Adjudicators for Performance Tapes

Bill Monday--Band Director; Logan Middle School; Logan, Utah

Dan Stowell--Band Director; Logan High School; Logan, Utah

Greg Wheeler--Band Director; Spring Creek Middle School; Hyde Park, Utah

APPENDIX D

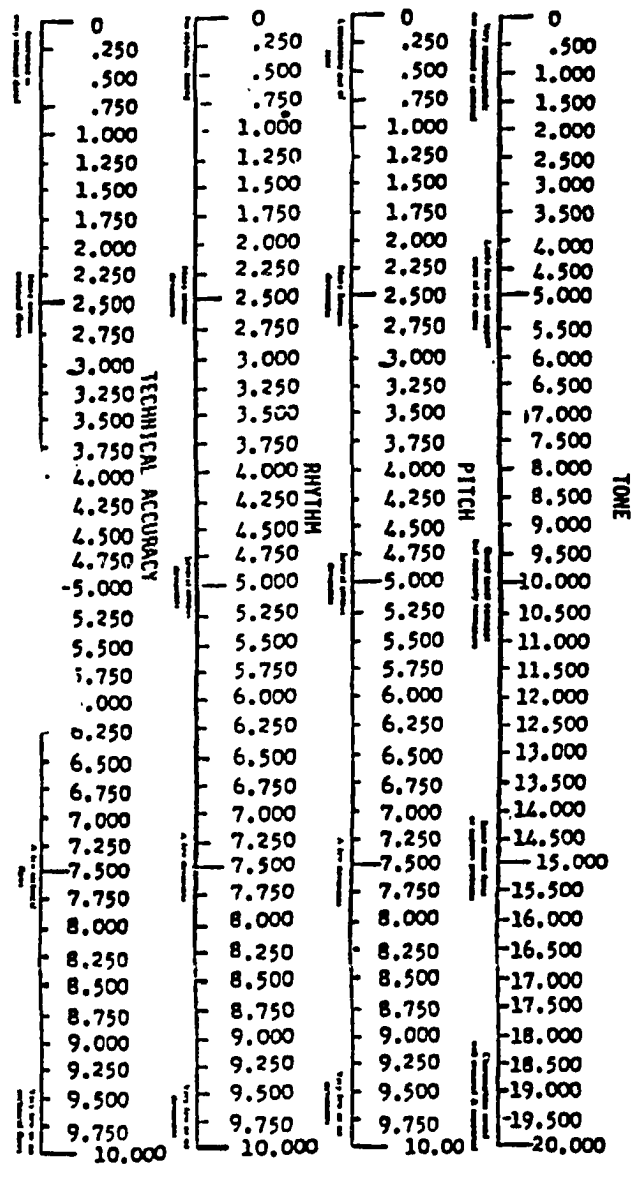
AUDIO ADJUDICATOR ASSESSMENT FORM

AUDITION SCORE SHEET

ARKANSAS SCHOOL BAND AND ORCHESTRA ASSOCIATION

Name_____ Playing No _____

TOTAL SCORE_____ RANK_____ INSTRUMENT_____ SCHOOL_____



APPENDIX E

STUDENT SELF-EVALUATION FORM

STUDENT SELF-EVALUATION WORKSHEET

NAME:
INSTRUMENT:
CLASS:

I. ON TASK (MARK ONE THRU FIVE IN ONE BOX FOR EACH LINE)

LINE ONE

1. TONE — VERY POOR POOR OK GOOD VERY GOOD
2. PITCH — VERY POOR POOR OK GOOD VERY GOOD
2. RHYTHM — VERY POOR POOR OK GOOD VERY GOOD
3. NOTES — VERY POOR POOR OK GOOD VERY GOOD
5. POSTURE, HAND POSITION, EMBOUCHURE — VERY POOR POOR OK GOOD VERY GOOD

LINE *TWO*

1. TONE — VERY POOR POOR OK GOOD VERY GOOD
2. PITCH — VERY POOR POOR OK GOOD VERY GOOD
2. RHYTHM — VERY POOR POOR OK GOOD VERY GOOD
3. NOTES — VERY POOR POOR OK GOOD VERY GOOD
5. POSTURE, HAND POSITION, EMBOUCHURE — VERY POOR POOR OK GOOD VERY GOOD

LINE *THREE*

1. TONE — VERY POOR POOR OK GOOD VERY GOOD
2. PITCH — VERY POOR POOR OK GOOD VERY GOOD
2. RHYTHM — VERY POOR POOR OK GOOD VERY GOOD
3. NOTES — VERY POOR POOR OK GOOD VERY GOOD
5. POSTURE, HAND POSITION, EMBOUCHURE — VERY POOR POOR OK GOOD VERY GOOD

LINE *FOUR*

1. TONE — VERY POOR POOR OK GOOD VERY GOOD

2. PITCH — VERY POOR POOR OK GOOD VERY GOOD

2. RHYTHM — VERY POOR POOR OK GOOD VERY GOOD

3. NOTES — VERY POOR POOR OK GOOD VERY GOOD

5. POSTURE, HAND POSITION, EMBOUCHURE — VERY POOR POOR OK GOOD VERY GOOD

II. PRACTICED AT HOME LAST NIGHT YES___ NO___

APPENDIX F

VIDEO ADJUDICATOR ASSESSMENT FORM

VIDEO-TAPE ASSESSMENT FORM

OBSERVATION # ____

NUMBER IN VIEW	SECTION IN VIEW	
EMBOUCHURE	HAND POSITION	POSTURE
# +T #-T	#+T #-T	#+T #-T

OBSERVATION # ____

NUMBER IN VIEW	SECTION IN VIEW	
EMBOUCHURE	HAND POSITION	POSTURE
# +T #-T	#+T #-T	#+T #-T

OBSERVATION # ____

NUMBER IN VIEW	SECTION IN VIEW	
EMBOUCHURE	HAND POSITION	POSTURE
# +T #-T	#+T #-T	#+T #-T

OBSERVATION # ____

NUMBER IN VIEW	SECTION IN VIEW	
EMBOUCHURE	HAND POSITION	POSTURE
# +T #-T	#+T #-T	#+T #-T

OBSERVATION # ____

NUMBER IN VIEW	SECTION IN VIEW	
EMBOUCHURE	HAND POSITION	POSTURE
# +T #-T	#+T #-T	#+T #-T

OBSERVATION # ____

NUMBER IN VIEW	SECTION IN VIEW	
EMBOUCHURE	HAND POSITION	POSTURE
# +T #-T	#+T #-T	#+T #-T

OBSERVATION # ____

NUMBER IN VIEW	SECTION IN VIEW	
EMBOUCHURE	HAND POSITION	POSTURE
# +T #-T	#+T #-T	#+T #-T

OBSERVATION # ____

NUMBER IN VIEW	SECTION IN VIEW	
EMBOUCHURE	HAND POSITION	POSTURE
# +T #-T	#+T #-T	#+T #-T

APPENDIX G

CALENDAR OF EXPERIMENTAL EVENTS

Calendar of Experimental Events

Tuesday, November 7.....Introductory Clinic

Wednesday, November 8.....Clinics Completed

Thursday, November 9.....First Individual Playing Tests

Friday, November 10.....First Group Playing Tests
First Day of Self-Evaluation
First Day of Filming

Monday, November 13 through
Thursday, November 16 .....Daily Self-Evaluations
Daily Filming

Friday, November 17.....Teacher Test Day
No Self-Evaluation

Monday, November 20 through
Wednesday, November 22.....Daily Self-Evaluations
Daily Filming

Thursday, November 23 through
Friday, November 24.....Thanksgiving Holiday

Monday, November 27.....Teacher Conference Day

Tuesday, November 28 through
Wednesday, November 29.....Daily Self-Evaluations
Daily Filming

Thursday, November 30.....Second Group Playing Tests

Friday, December 1.....Teacher Test Day

Monday, December 4 through
Thursday, December 7.....Daily Self-Evaluations
Daily Filming

Friday, December 8.....Teacher Test Day

Monday, December 11 through
Thursday, December 14.....Daily Self-Evaluations
Daily Filming

Friday, December 15.....Teacher Test Day

Monday, December 18 through
Tuesday, December 19.....Daily Self-Evaluations
Daily Filming

Wednesday, December 20.....Playing Tests

Thursday, December 21.....Follow-Up Clinics

APPENDIX H

LIST OF ADJUDICATORS FOR VIDEOTAPES

List of Adjudicators for Videotapes

Homer Brown, Jr.--Former Director of Bands: University of Central Arkansas: Conway, Arkansas

Jacqueline Lamar, Ph.D.--Applied Music Professor: University of Central Arkansas; Conway, Arkansas

Arthur Reidel--Applied Music Professor: University of Southwestern Louisiana: Lafayette, Louisiana

Robert Sparks-- Applied Music Professor: Texas Wesleyan College: Fort Worth, Texas

APPENDIX I

PERCENTAGES OF ON-TASK HAND POSITION BY DAY

Percentages of On-Task Hand Position by Day

Day	Control	Experimental
1	54	89
2	55	98
3	76	94
4	74	98
5	79	98
6	72	98
7	94	90
8	64	97
9	68	92
10	76	87
11	78	88
12	74	89
13	83	80
14	77	97
15	82	96
16	84	95
Mean Percentage Scores	74	87

APPENDIX J

PERCENTAGES OF ON-TASK POSTURE BY DAY

Percentages of On-Task Posture by Day

Day	Control	Experimental
1	90	90
2	90	98
3	92	94
4	97	95
5	99	100
6	100	100
7	100	100
8	100	100
9	88	91
10	98	92
11	96	89
12	96	98
13	98	91
14	94	98
15	96	100
16	100	100
Mean Percentage Scores	95	96

APPENDIX J

PERCENTAGES OF ON-TASK EMBOUCHURE BY DAY

Percentages of On-Task Embouchure by Day

Day	Control	Experimental
1	60	71
2	56	72
3	47	74
4	66	86
5	81	96
6	93	95
7	96	92
8	89	92
9	100	80
10	68	70
11	64	82
12	66	79
13	65	74
14	68	92
15	76	95
16	89	94
Mean Percentage Scores	74	84

APPENDIX K

DATA TABLES

	Subjects	Group	AttPre1	AttPre2	AttPre3	AttPre4	AttPre5
1	N	CONTROL	1.00	1.00	1.00	1.00	3.00
2	B	CONTROL	1.00	2.00	1.00	1.00	1.00
3	L	CONTROL	1.00	1.00	1.00	1.00	1.00
4	S	CONTROL	3.00	2.00	1.00	1.00	4.00
5	T	CONTROL	1.00	2.00	1.00	1.00	1.00
6	D	CONTROL	3.00	2.00	2.00	1.00	2.00
7	D	CONTROL	1.00	1.00	2.00	1.00	1.00
8	M	CONTROL	1.00	2.00	1.00	1.00	1.00
9	J	CONTROL	2.00	2.00	1.00	1.00	1.00
10	J	CONTROL	3.00	2.00	2.00	1.00	2.00
11	R	CONTROL	3.00	2.00	1.00	1.00	4.00
12	T	CONTROL	2.00	1.00	2.00	1.00	2.00
13	H	CONTROL	2.00	2.00	2.00	1.00	2.00
14	T	CONTROL	2.00	1.00	2.00	1.00	1.00
15	M	CONTROL	1.00	1.00	1.00	3.00	2.00
16	S	CONTROL	3.00	2.00	2.00	2.00	4.00
17	L	CONTROL	2.00	2.00	1.00	1.00	2.00
18	R	CONTROL	3.00	2.00	2.00	2.00	4.00
19	S	CONTROL	2.00	1.00	1.00	1.00	1.00
20	S	CONTROL	2.00	2.00	1.00	3.00	2.00
21	L	CONTROL	2.00	2.00	1.00	1.00	2.00
22	S	CONTROL	2.00	3.00	1.00	2.00	3.00
23	L	CONTROL	1.00	1.00	1.00	2.00	1.00
24	S	CONTROL	1.00	1.00	2.00	1.00	2.00
25	B	CONTROL	1.00	1.00	1.00	1.00	1.00
26	R	CONTROL	2.00	2.00	2.00	1.00	2.00
27	J	CONTROL	2.00	2.00	1.00	1.00	3.00
28	M	CONTROL	3.00	2.00	1.00	1.00	2.00
29	A	EXPERI...	1.00	1.00	1.00	1.00	1.00
30	B	EXPERI...	2.00	1.00	2.00	1.00	2.00
31	M	EXPERI...	1.00	1.00	1.00	1.00	2.00
32	S	EXPERI...	4.00	1.00	1.00	1.00	2.00
33	B	EXPERI...	2.00	1.00	1.00	1.00	1.00
34	L	EXPERI...	4.00	3.00	2.00	1.00	2.00
35	J	EXPERI...	2.00	2.00	2.00	2.00	3.00
36	B	EXPERI...	1.00	3.00	1.00	1.00	4.00
37	J	EXPERI...	3.00	3.00	1.00	4.00	4.00
38	P	EXPERI...	1.00	2.00	1.00	1.00	1.00
39	J	EXPERI...	1.00	3.00	1.00	4.00	4.00
40	J	EXPERI...	2.00	2.00	1.00	1.00	1.00
41	B	EXPERI...	4.00	1.00	1.00	1.00	2.00
42	G	EXPERI...	2.00	3.00	2.00	3.00	4.00

	Subjects	Group	AttPre1	AttPre2	AttPre3	AttPre4	AttPre5
43	T	EXPERI...	4.00	4.00	4.00	4.00	3.00
44	J	EXPERI...	3.00	2.00	1.00	1.00	1.00
45	R	EXPERI...	1.00	1.00	2.00	1.00	1.00
46	D	EXPERI...	3.00	1.00	2.00	1.00	2.00
47	A	EXPERI...	2.00	1.00	4.00	1.00	4.00
48	M	EXPERI...	4.00	2.00	1.00	4.00	1.00
49	J	EXPERI...	1.00	4.00	3.00	2.00	4.00
50	J	EXPERI...	2.00	2.00	2.00	2.00	3.00
51	H	EXPERI...	2.00	2.00	2.00	2.00	2.00
52	B	EXPERI...	2.00	2.00	3.00	1.00	2.00
53	E	EXPERI...	3.00	2.00	1.00	4.00	4.00
54	L	EXPERI...	3.00	2.00	2.00	1.00	3.00
55	Y	EXPERI...	3.00	1.00	2.00	1.00	2.00
56	J	EXPERI...	1.00	1.00	1.00	3.00	1.00
57	C	EXPERI...	4.00	1.00	1.00	4.00	1.00

	AttPre6	AttPre7	AttPreTot	AttPost1	AttPost2	AttPost3	AttPost4
1	1.00	1.00	8.00	1.00	1.00	1.00	1.00
2	3.00	2.00	10.00	1.00	1.00	1.00	1.00
3	1.00	1.00	6.00	1.00	1.00	2.00	1.00
4	3.00	1.00	14.00	2.00	3.00	2.00	1.00
5	3.00	3.00	11.00	1.00	1.00	1.00	1.00
6	3.00	4.00	16.00	2.00	2.00	3.00	1.00
7	1.00	2.00	8.00	1.00	1.00	1.00	1.00
8	2.00	2.00	9.00	3.00	2.00	2.00	1.00
9	2.00	2.00	9.00	3.00	1.00	1.00	1.00
10	1.00	2.00	11.00	1.00	1.00	1.00	1.00
11	4.00	2.00	16.00	2.00	2.00	1.00	1.00
12	1.00	4.00	12.00	1.00	2.00	2.00	1.00
13	1.00	2.00	11.00	2.00	2.00	3.00	1.00
14	1.00	3.00	10.00	3.00	1.00	2.00	2.00
15	1.00	2.00	8.00	2.00	1.00	1.00	1.00
16	3.00	3.00	17.00	4.00	1.00	2.00	2.00
17	3.00	2.00	12.00	4.00	1.00	1.00	1.00
18	1.00	4.00	16.00	3.00	2.00	2.00	1.00
19	1.00	2.00	8.00	2.00	2.00	1.00	1.00
20	2.00	2.00	11.00	2.00	3.00	2.00	1.00
21	2.00	2.00	11.00	3.00	2.00	1.00	1.00
22	3.00	4.00	16.00	3.00	1.00	2.00	2.00
23	1.00	1.00	6.00	1.00	1.00	1.00	1.00
24	1.00	2.00	9.00	1.00	2.00	2.00	1.00
25	1.00	1.00	6.00	1.00	1.00	1.00	1.00
26	1.00	3.00	13.00	2.00	2.00	3.00	2.00
27	2.00	2.00	10.00	1.00	2.00	1.00	1.00
28	1.00	2.00	11.00	3.00	3.00	3.00	2.00
29	1.00	1.00	6.00	2.00	2.00	1.00	1.00
30	1.00	3.00	11.00	2.00	2.00	2.00	1.00
31	2.00	2.00	9.00	1.00	1.00	1.00	1.00
32	3.00	2.00	13.00	3.00	1.00	2.00	1.00
33	1.00	1.00	7.00	2.00	1.00	1.00	1.00
34	3.00	2.00	16.00	3.00	1.00	2.00	1.00
35	2.00	2.00	13.00	2.00	1.00	2.00	2.00
36	2.00	1.00	12.00	2.00	2.00	2.00	1.00
37	3.00	4.00	18.00	2.00	2.00	1.00	4.00
38	3.00	4.00	12.00	1.00	1.00	2.00	1.00
39	2.00	1.00	12.00	1.00	1.00	1.00	2.00
40	3.00	2.00	11.00	2.00	1.00	2.00	1.00
41	1.00	1.00	10.00	2.00	1.00	1.00	1.00
42	3.00	4.00	18.00	3.00	2.00	3.00	1.00

	AttPre6	AttPre7	AttPreTot	AttPost1	AttPost2	AttPost3	AttPost4
43	2.00	3.00	20.00	4.00	4.00	3.00	3.00
44	1.00	1.00	9.00	3.00	1.00	3.00	1.00
45	1.00	1.00	7.00	1.00	1.00	2.00	1.00
46	1.00	2.00	11.00	2.00	1.00	2.00	1.00
47	3.00	2.00	16.00	2.00	1.00	2.00	2.00
48	1.00	4.00	13.00	4.00	3.00	3.00	4.00
49	3.00	4.00	19.00	4.00	1.00	2.00	2.00
50	2.00	3.00	14.00	1.00	2.00	3.00	1.00
51	1.00	3.00	12.00	2.00	1.00	2.00	1.00
52	2.00	2.00	13.00	2.00	2.00	2.00	1.00
53	2.00	1.00	13.00	2.00	2.00	2.00	1.00
54	1.00	3.00	14.00	3.00	2.00	1.00	2.00
55	1.00	2.00	11.00	3.00	1.00	2.00	2.00
56	1.00	1.00	6.00	1.00	1.00	2.00	1.00
57	2.00	1.00	10.00	4.00	2.00	1.00	3.00

	AttPost5	AttPost6	AttPost7	AttPostTot	TONEPRE	PITCHPRE	RHYTHMPRE
1	4.00	1.00	1.00	9.00	26.000	13.750	12.500
2	1.00	1.00	1.00	6.00	16.500	10.000	13.250
3	1.00	1.00	2.00	8.00	23.500	12.500	17.000
4	3.00	4.00	1.00	15.00	8.000	7.000	15.750
5	1.00	1.00	3.00	8.00	5.000	6.000	13.500
6	1.00	1.00	4.00	13.00	13.500	6.000	8.250
7	2.00	1.00	2.00	8.00	16.500	6.750	16.750
8	2.00	1.00	2.00	12.00	27.500	14.750	18.500
9	1.00	3.00	3.00	12.00	14.500	8.500	5.500
10	1.00	1.00	3.00	8.00	24.500	12.000	15.250
11	1.00	3.00	1.00	10.00	27.500	15.000	19.250
12	2.00	2.00	3.00	12.00	6.500	3.750	7.250
13	2.00	1.00	2.00	12.00	25.000	13.500	21.000
14	2.00	1.00	2.00	11.00	17.500	7.250	6.500
15	2.00	1.00	2.00	9.00	15.500	7.000	7.500
16	2.00	2.00	3.00	14.00	12.500	5.500	8.500
17	2.00	2.00	1.00	11.00	21.000	15.000	15.500
18	3.00	1.00	2.00	13.00	36.000	18.750	21.000
19	1.00	1.00	1.00	8.00	35.000	18.500	15.750
20	2.00	2.00	1.00	12.00	41.500	19.750	20.750
21	4.00	2.00	2.00	15.00	25.000	14.500	17.250
22	4.00	3.00	4.00	17.00	26.000	14.250	17.500
23	2.00	2.00	2.00	9.00	19.000	11.000	16.250
24	2.00	2.00	4.00	13.00	19.000	8.750	15.500
25	1.00	1.00	1.00	6.00	14.000	8.750	10.500
26	2.00	1.00	3.00	13.00	28.500	14.000	18.000
27	4.00	2.00	2.00	12.00	20.000	9.750	17.250
28	3.00	3.00	3.00	18.00	12.500	6.500	9.750
29	1.00	1.00	1.00	7.00	33.500	16.000	17.250
30	2.00	1.00	3.00	12.00	26.000	12.000	14.500
31	1.00	2.00	2.00	8.00	20.000	10.000	8.250
32	2.00	2.00	2.00	12.00	23.000	10.500	15.250
33	2.00	1.00	1.00	8.00	25.000	12.000	14.500
34	1.00	3.00	1.00	11.00	30.000	14.750	19.500
35	1.00	1.00	1.00	8.00	14.000	6.250	9.750
36	3.00	2.00	2.00	13.00	22.500	11.250	16.250
37	3.00	2.00	3.00	13.00	15.500	8.000	10.500
38	1.00	1.00	3.00	9.00	14.500	7.000	6.500
39	1.00	1.00	1.00	6.00	17.500	9.000	16.250
40	1.00	2.00	2.00	10.00	18.500	9.500	10.750
41	3.00	1.00	2.00	10.00	15.000	7.750	13.750
42	4.00	3.00	2.00	17.00	14.500	6.750	13.000

	AttPost5	AttPost6	AttPost7	AttPostTot	TONEPRE	PITCHPRE	RHYTHMPRE
43	4.00	4.00	3.00	22.00	10.000	3.000	12.500
44	1.00	1.00	1.00	9.00	21.000	13.000	18.500
45	1.00	1.00	2.00	8.00	17.500	8.750	17.500
46	2.00	1.00	2.00	10.00	19.500	8.500	8.500
47	2.00	1.00	2.00	11.00	10.500	4.500	15.750
48	2.00	1.00	1.00	13.00	9.500	5.250	10.500
49	4.00	1.00	3.00	16.00	10.000	5.250	3.500
50	2.00	1.00	2.00	10.00	14.500	6.500	9.250
51	2.00	2.00	1.00	10.00	5.000	2.250	5.500
52	1.00	1.00	3.00	11.00	8.000	3.750	7.750
53	2.00	1.00	1.00	9.00	25.500	12.500	19.250
54	4.00	1.00	3.00	15.00	11.500	6.000	13.500
55	2.00	1.00	2.00	11.00	36.000	17.000	17.500
56	1.00	2.00	1.00	7.00	21.500	9.000	11.000
57	3.00	1.00	2.00	13.00	24.500	13.250	10.250

	TECHNIQUEPRE	PERFPRETOT	TONEPOST	PITCHPOST	RHYTHMPOST
1	15.000	67.250	20.000	10.000	15.750
2	15.000	54.750	13.500	7.750	4.750
3	17.000	70.000	36.000	17.500	15.250
4	15.000	45.750	28.000	15.000	19.250
5	11.250	35.750	34.000	15.500	17.250
6	6.250	34.000	7.000	6.500	4.750
7	12.250	52.250	36.500	18.000	16.000
8	18.250	79.000	26.500	15.000	18.250
9	8.000	36.500	25.000	11.250	12.500
10	15.250	57.000	17.000	9.250	10.750
11	19.250	81.000	35.000	17.250	19.250
12	5.250	22.750	4.000	6.250	13.750
13	19.750	79.250	18.500	10.500	10.750
14	6.500	37.750	17.000	9.000	8.750
15	9.500	39.500	18.500	9.750	16.500
16	4.000	30.500	21.000	10.750	9.500
17	14.750	66.250	23.000	11.750	18.500
18	20.000	95.750	22.500	11.500	16.250
19	16.750	86.000	11.000	6.750	12.500
20	20.500	102.500	28.500	18.000	16.750
21	17.250	74.000	25.000	14.000	12.750
22	18.000	75.750	11.500	8.000	14.000
23	15.750	62.000	20.500	10.250	15.750
24	12.500	55.750	14.500	7.250	11.250
25	9.750	43.000	9.500	5.250	15.500
26	13.500	74.000	20.500	9.750	18.500
27	14.250	61.250	7.500	4.750	5.000
28	5.500	33.250	14.500	8.000	9.500
29	16.500	83.250	27.000	14.000	18.250
30	9.250	61.750	16.000	8.000	5.750
31	10.000	48.250	25.500	12.500	13.000
32	16.250	65.000	30.000	15.500	19.500
33	14.250	54.750	27.000	13.250	13.750
34	19.250	83.500	29.500	14.250	17.250
35	6.500	36.500	23.500	12.000	16.250
36	16.000	66.000	26.000	14.500	19.000
37	8.000	42.000	23.500	11.500	16.750
38	8.250	36.250	25.500	11.500	8.250
39	14.250	57.000	13.500	10.500	13.750
40	12.250	51.000	30.000	16.000	17.500
41	13.750	50.250	20.500	13.000	14.500
42	8.500	36.750	18.000	14.000	14.000

	TECHNIQUEPRE	PERFPRETOT	TONEPOST	PITCHPOST	RHYTHMPOST
43	7.000	22.500	17.500	4.500	3.000
44	17.250	69.750	15.500	10.000	17.250
45	14.000	57.750	20.500	13.750	22.000
46	7.250	43.750	15.000	15.500	15.000
47	9.500	40.250	12.000	3.500	4.750
48	7.750	33.000	19.500	10.500	19.750
49	4.500	23.250	7.000	3.000	8.750
50	7.750	38.000	7.500	1.500	5.500
51	1.750	15.500	13.000	7.000	11.250
52	3.500	23.000	4.000	2.500	1.500
53	17.750	75.000	16.000	12.500	20.500
54	14.250	45.250	13.000	8.500	15.750
55	17.000	87.500	13.000	10.000	18.250
56	9.000	50.500	24.000	13.000	19.000
57	13.000	61.000	15.000	6.000	9.000

	TECHNIQUEPOST	PERFTOTPOST	AttDiff	ATT1DIFF	ATT2DIFF	ATT3DIFF
1	13.750	59.500	1.000	0	0	0
2	10.250	36.250	-4.000	0	-1.000	0
3	15.250	78.000	2.000	0	0	1.000
4	15.750	78.000	1.000	-1.000	1.000	1.000
5	18.000	84.750	-3.000	0	-1.000	0
6	5.500	23.750	-3.000	-1.000	0	1.000
7	17.250	87.750	0	0	0	-1.000
8	16.750	75.500	3.000	2.000	0	1.000
9	13.250	62.000	3.000	1.000	-1.000	0
10	12.000	49.000	-3.000	-2.000	-1.000	-1.000
11	19.000	90.500	-6.000	-1.000	0	0
12	11.750	35.750	0	-1.000	1.000	0
13	12.250	52.000	1.000	0	0	1.000
14	7.500	42.250	1.000	1.000	0	0
15	16.500	61.250	1.000	1.000	0	0
16	11.000	52.250	-3.000	1.000	-1.000	0
17	17.000	70.250	-1.000	2.000	-1.000	0
18	14.500	64.750	-3.000	0	0	0
19	9.000	39.250	0	0	1.000	0
20	18.000	81.250	1.000	0	1.000	1.000
21	10.750	60.500	4.000	1.000	0	0
22	12.000	45.500	1.000	1.000	-2.000	1.000
23	14.750	61.250	3.000	0	0	0
24	11.500	44.500	4.000	0	1.000	0
25	14.500	44.750	0	0	0	0
26	17.000	65.750	0	0	0	1.000
27	7.000	24.250	2.000	-1.000	0	0
28	6.000	38.000	7.000	0	1.000	2.000
29	16.750	76.000	1.000	1.000	1.000	0
30	8.000	37.750	1.000	0	1.000	0
31	13.750	64.750	-1.000	0	0	0
32	18.750	83.750	-1.000	-1.000	0	1.000
33	14.250	58.250	1.000	0	0	0
34	17.000	78.000	-3.000	-1.000	-2.000	0
35	14.500	66.500	-5.000	0	-1.000	0
36	17.000	76.500	1.000	1.000	-1.000	1.000
37	16.000	67.750	-5.000	-1.000	-1.000	0
38	14.750	59.000	-3.000	0	-1.000	1.000
39	13.750	51.500	-6.000	0	-2.000	0
40	18.250	81.750	-1.000	0	-1.000	1.000
41	17.000	64.500	0	-2.000	0	0
42	14.750	60.750	-1.000	1.000	-1.000	1.000

	TECHNIQUEPOST	PERFTOTPOST	AttDiff	ATT1DIFF	ATT2DIFF	ATT3DIFF
43	3.250	27.750	2.000	0	0	-1.000
44	15.500	58.250	0	0	-1.000	2.000
45	18.000	74.250	1.000	0	0	0
46	12.500	58.000	-1.000	-1.000	0	0
47	5.750	26.000	-5.000	0	0	-2.000
48	17.500	67.250	0	0	1.000	2.000
49	5.500	24.250	-3.000	3.000	-3.000	-1.000
50	4.750	19.250	-4.000	-1.000	0	1.000
51	8.000	39.250	-2.000	0	-1.000	0
52	2.500	10.500	-2.000	0	0	-1.000
53	16.000	65.000	-4.000	-1.000	0	1.000
54	14.250	51.500	1.000	0	0	-1.000
55	13.500	54.750	0	0	0	0
56	17.750	73.750	1.000	0	0	1.000
57	9.250	39.250	3.000	0	1.000	0

	ATT4DIFF	ATT5DIFF	ATT6DIFF	ATT7DIFF	TONEDIFF	PITCHDIFF	RHYTHMDIFF
1	0	1.000	0	0	-6.000	-3.750	3.250
2	0	0	-2.000	-1.000	-3.000	-2.250	-8.500
3	0	0	0	1.000	12.500	5.000	-1.750
4	0	-1.000	1.000	0	20.000	8.000	3.500
5	0	0	-2.000	0	29.000	9.500	3.750
6	0	-1.000	-2.000	0	-6.500	.500	-3.500
7	0	1.000	0	0	20.000	11.250	-.750
8	0	1.000	-1.000	0	-1.000	.250	-.250
9	0	0	1.000	1.000	10.500	2.750	7.000
10	0	-1.000	0	1.000	-7.500	-2.750	-4.500
11	0	-3.000	-1.000	-1.000	7.500	2.250	0
12	0	0	1.000	-1.000	-2.500	2.500	6.500
13	0	0	0	0	-6.500	-3.000	-10.250
14	1.000	1.000	0	-1.000	-.500	1.750	2.250
15	-2.000	0	0	0	3.000	2.750	9.000
16	0	-2.000	-1.000	0	8.500	5.250	1.000
17	0	0	-1.000	-1.000	2.000	-3.250	3.000
18	-1.000	-1.000	0	-2.000	-13.500	-7.250	-4.750
19	0	0	0	-1.000	-24.000	-11.750	-3.250
20	-2.000	0	0	-1.000	-13.000	-1.750	-4.000
21	0	2.000	0	0	0	-.500	-4.500
22	0	1.000	0	0	-14.500	-6.250	-3.500
23	-1.000	1.000	1.000	1.000	1.500	-.750	-.500
24	0	0	1.000	2.000	-4.500	-1.500	-4.250
25	0	0	0	0	-4.[illegible]0	-3.500	5.000
26	1.000	0	0	0	-8.000	-4.250	.500
27	0	1.000	0	0	-12.500	-5.000	-12.250
28	1.000	1.000	2.000	1.000	2.000	1.500	.250
29	0	0	0	0	-6.500	-2.000	1.000
30	0	0	0	0	-10.000	-4.000	-8.750
31	0	-1.000	0	0	5.500	2.500	4.750
32	0	0	-1.000	0	7.000	5.000	4.250
33	0	1.000	0	0	2.000	1.250	-.750
34	0	-1.000	0	-1.000	-.500	-.500	-2.250
35	0	-2.000	-1.000	-1.000	9.500	5.750	6.500
36	0	-1.000	0	1.000	3.500	3.250	2.750
37	0	-1.000	-1.000	-1.000	8.000	3.500	6.250
38	0	0	-2.000	-1.000	11.000	4.500	1.750
39	-2.000	-3.000	-1.000	0	-4.000	1.500	-2.500
40	0	0	-1.000	0	11.500	6.500	6.750
41	0	1.000	0	1.000	5.500	5.250	.750
42	-2.000	0	0	-2.000	3.500	7.250	1.000

	ATT4DIFF	ATT5DIFF	ATT6DIFF	ATT7DIFF	TONEDIFF	PITCHDIFF	RHYTHMDIFF
43	-1.000	1.000	2.000	0	7.500	1.500	-9.500
44	0	0	0	0	-5.500	-3.000	-1.250
45	0	0	0	1.000	3.000	5.000	4.500
46	0	0	0	0	-4.500	7.000	6.500
47	1.000	-2.000	-2.000	0	1.500	-1.000	-11.000
48	0	1.000	0	-3.000	10.000	5.250	9.250
49	0	0	-2.000	-1.000	-3.000	-2.250	5.250
50	-1.000	-1.000	-1.000	-1.000	-7.000	-5.000	-3.750
51	-1.000	0	1.000	-2.000	8.000	4.750	5.750
52	0	-1.000	-1.000	1.000	-4.000	-1.250	-6.250
53	-3.000	-2.000	-1.000	0	-9.500	0	1.250
54	1.000	1.000	0	0	1.500	2.500	2.250
55	1.000	0	0	0	-23.000	-7.000	.750
56	-2.000	0	1.000	0	2.500	4.000	8.000
57	-1.000	2.000	-1.000	1.000	-9.500	-7.250	-1.250

	TECHDIFF	PERDIFF
1	-1.250	-7.750
2	-4.750	-18.500
3	-1.750	8.000
4	.750	32.250
5	6.750	49.000
6	-.750	-10.250
7	5.000	35.500
8	-1.500	-3.500
9	5.250	25.500
10	-3.250	-8.000
11	-.250	9.500
12	6.500	13.000
13	-7.500	-27.250
14	1.000	4.500
15	7.000	21.750
16	7.000	21.750
17	2.250	4.000
18	-5.500	-31.000
19	-7.750	-46.750
20	-2.500	-21.250
21	-6.500	-13.500
22	-6.000	-30.250
23	-1.000	-.750
24	-1.000	-11.250
25	4.750	1.750
26	3.500	-8.250
27	-7.250	-37.000
28	1.500	4.750
29	.250	-7.250
30	-1.250	-24.000
31	3.750	16.500
32	2.500	18.750
33	0	3.500
34	-2.250	-5.500
35	8.000	30.000
36	1.000	10.500
37	8.000	25.750
38	6.500	22.750
39	-.500	-5.500
40	6.000	30.750
41	3.250	14.250
42	6.250	24.000

	TECHDIFF	PERDIFF
43	-3.750	5.250
44	-1.750	-11.500
45	4.000	16.500
46	5.250	14.250
47	-3.750	-14.250
48	9.750	34.250
49	1.000	1.000
50	-3.000	-18.750
51	6.250	23.750
52	-1.000	-12.500
53	-1.750	-10.000
54	0	6.250
55	-3.500	-32.750
56	8.750	23.250
57	-3.750	-21.750

VITA

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DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: George Ed Sparks

Major Field: Music

Title of Dissertation: The effect of self-evaluation on musical achievement, attentiveness, and attitudes of elementary school instrumental students

Approved:

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Date of Examination:

April 17, 1990